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An archaeological study of Egyptian houses,
particularly those from the hellenistic period.

Volumes I and II.

Volume II

- by -

Rachel Elizabeth Campbell

A dissertation submitted for
the Degree of Doctor of Philosophy of
the University of Durham.

Researched in the Department of Oriental Studies

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FOOTNOTES TO CHAPTER I

1. The amount of furniture in a house is likewise related to these factors, since if the climate allows life to be based in the open, the house will have the minimum of furniture, whilst more is necessary if the lifestyle is centred within the house.
2. Houses like those at Wijster in Holland, which had either wattle and daub or wooden walls and which were built in two distinct sections, one for humans and one for cattle and horses (Van Es (1967) ch. XIX).
3. Thompson (1965) maps 15, 16 and 28 especially.
4. For a summary of early structures from Egypt, see Badawy (1951) pp. 1-28 and especially pp.21 ff.
5. This is indicated by evidence from sites in the Faiyum and Middle Egypt, whose inhabitants grew cereals and made pottery. Sickles have been found, which could have been used for harvesting crops (Edwards (1964) p. 23).
6. Butzer (1976) p. 83 reckons the population density as between 30-75 individuals/km² in 3,000 BC.
7. Considerable evidence on early dynastic forms of palaces and other buildings can be gleaned from I dynasty tombs at Saqqara and Abydos (Smith (1958) p. 35).
8. Petrie (1907).
9. Petrie (1907) pl. XV, no. 86.
10. X dynasty models, but possibly earlier as well, like Petrie (1907) pl. XVIIIA, no. 69.
11. Petrie (1907) pl. XVIA, no. 13. The use of the portico continued and is reflected in slightly later tombs of the Middle Kingdom from Beni Hasan, such as those of Amenemhat (2) and Khnumhotep (3) (Newberry (1903) pls. IV & XXII).
12. Petrie (1907) pl. XVIA, no. 19.
13. Petrie (1907) pl. XVIII, no. 101.
14. Petrie (1907) pl. XIX, no. 43.
15. Petrie (1907) p. 18.



16. Winlock (1955) pp. 17-19.
17. Winlock (1955) pl. 9.
18. Kamal (1902) p. 31.
19. Steindorff (1896) points out the parallelism between house, temple and tomb plans. A temple which is contemporary with the XII dynasty, rather than belonging to the New Kingdom, as do his examples, is that at Medinet Ma'adi in the Faiyum, dedicated to Isis and Sobek. This shares with the tombs at Beni Hasan and the mansions at 'Kahun' the columned portico, (more enclosed than at Beni Hasan) and main chamber and the private rooms behind (Naumann (1938) p. 185).
20. Petrie (1891).
21. Petrie (1891) pp. 6-7.
22. Newberry (1893) pp. 20 & 25 .
23. Badawy (1968) p. 60.
24. The house of Thay is unlikely to have been in the centre of the town, since there is a gate which appears to indicate some land as part of the building which would be unlikely in the centre where conditions would be most cramped (Davies (1928) Fig. 7).
25. Davies (1928) Fig.1A and B, pp. 236-240.
26. Desroches (1938) p.22.
27. Like the house of Nakht (K.50.1) (Frankfort & Pendlebury (1923) p. 5.
28. Desroches (1938) pp. 17-19.
29. Davies (1928) Fig. 9, p. 245.
30. Badawy (1968) p. 20.
31. Grossmann et al. (1974) pp. 76-80. Kaiser et. al. (1977) pp. 88-91.
32. This orientation changed about the reign of Neētanebo II (c. 360-343 BC) to follow the line of the temple of Khnum and was then taken over by the Ptolemaic building KII, which formed the first domestic structure of the new

- orientation (Kaiser et al. (1971) p. 195).
33. Kaiser et al. (1977) p. 89.
 34. Kaiser et al. (1976) Abb. 6, p. 96.
 35. Kaiser et al. (1977) p. 89.
 36. Kaiser et al. (1974) p. 79.
 37. Kaiser et al. (1977) Abb. 10, p. 90.
 38. Kaiser et al. (1974) Abb. 2, p. 77.
 39. The intercolumnar distance was 2.5 m, so without a central pillar the space would have been 5 m, which would have called for a very long architrave and would have left it unsupported in the vulnerable central point.
 40. Grossmann mentions that building D only stood for a short time, which corroborates this (Kaiser et al. (1977) p. 89).
 41. Pendlebury (1951) pp. 113-114 and pl. XIX.
 42. Frankfort & Pendlebury (1933) pl. XIII.
 43. Hölscher (1941) p. 16, fig. 17.
 44. For a discussion of how typical a settlement el-Amarna can be regarded see Kemp (1972).
 45. Peet & Woolley (1923) ch. III.
 46. Peet & Woolley (1923) p. 57, but see below pp. 299 ff.
 47. Peet & Woolley (1923) p. 60.
 48. Very similar to these in plan, but slightly more individual are the remains of servants' quarters attached to the Great Palace. The main difference is the presence of one or two columns in the entrance hall, which sometimes also had small side chambers. In the largest house of the northern row, the entrance door led into a small vestibule, similar to that in the 'mansions'. The central part generally contained the staircase and sometimes had two columns, while the back section consisted of a row of tiny rooms (Pendlebury (1951) pp. 35-37 and pl. XII A.1.).
 49. Pendlebury (1951) pp. 122-3 and pl. XX. This theory was

confirmed by the discovery in one, 43, of a cuneiform tablet, and it is possible that in fact they were not permanently occupied, but rather formed the clerks' place of work, similar to the official residences of some of the important officers, like that of Panehsy (T. 41.1) where they could live for a few days if necessary (Pendlebury (1951) p. 20 and pl. XI).

50. Ricke (1932) tafel 16.
51. Frankfort & Pendlebury (1933).
52. See below, pp. 350, Ch. V.
53. Frankfort & Pendlebury (1933) pp. 41-42 and pl. VII.
54. Frankfort & Pendlebury (1933) pp. 63-66 and pl. Xv.
55. See footnote 48.
56. Bruyere (1939) pl. XXIX.
57. Frankfort & Pendlebury (1933) p. 64.
58. Peet & Woolley (1923) pp. 5-9 and Ricke (1932) pp. 38-9 and Abb. 38.
59. Peet & Woolley (1923) p. 9.
60. Petrie (1894) p. 23 and pl. XL.
61. Bruyere (1939) pl. XXIX.
62. For a fuller discussion, see chapter IV, pp. 303 ff.
63. Hölscher (1934) pl. 10.
64. These were based on the plan of the palace of Ramesses II at the Ramesseum, which stood in exactly the same place in relation to the temple and which had a virtually identical plan. Like the palaces at Medinet Habu, the portico faced on to the first court of the temple and the throne was axially placed as in the first building of Ramesses III. As at Medinet Habu, there was a row of buildings inside the enclosure wall but behind the actual palace; at the Ramesseum there were four houses placed side by side, each entered from a side passage that separated the buildings. In plan they were slightly more elaborate versions of the basic strip house (which formed the comparable buildings in the second palace at Medinet Habu), having side chambers

and so making the central hall squarer than usual. Unlike the second palace at Medinet Habu, Hölscher considered these were not for the harim, but for members of the royal household (Hölscher (1941) p. 77 ff.).

65. Hölscher (1954) p. 5.
66. Hölscher (1934), pl. 10.
67. It is interesting that a stand for water jugs formed an integral part of the houses at Coptic Medinet Habu - Djeme - and one suspects that such a feature was a real continuation from pharaonic time. (Hölscher (1954) p. 46). From the pharaonic period, there were stands for water jugs at el-Amarna and in the harim quarters at el-Malqata (Peet & Woolley (1923) pl. 4 & Tytus (1903) p. 11).
68. Hölscher (1934) pl.4 and (1954) p. 7 & figs. 5.
69. Hölscher (1954) p. 14.
70. Hölscher (1954) pp. 45-51.
71. Hölscher (1954) p. 15.
72. Anus and Sa'ad (1971).
73. Anus & Sa'ad (1971) p. 238.
74. Also much later in the Byzantine military settlement in the temple of Khnum at Elephantine.
75. They vary between about 50 cm for a front wall to 1.50 m for a shared wall.
76. Peet and Woolley (1923) p. 58.
77. Peet and Woolley (1923), pp. 56-57.
78. For a fuller discussion, see chapter IV, pp. 297 ff, and Appendix II.
79. One example of a strip house earlier than those at el-Amarna and Deir el-Medina is the house of the harim ladies at the palace of Amenophis III at el-Malqata. The eight houses, divided into two rows of four, each facing onto the columned hall of the palace show the plan clearly (Plan XXV.) although there are some additions and a considerable amount of extra storage space added. The question of how these houses were lit is difficult; one

suspects that here the light was admitted through clerestory windows in accordance with the situation in the palace itself, although, in the two slightly larger houses at the top of each row which had four columns in the central room rather than two, it is conceivable there was some kind of arrangement similar to that from 'Kahun' where there was a columned portico round a central opening. The houses at el-Malqata, if lit by clerestory windows, would have had their light source restricted to some extent by the clerestory of the palace hall, but despite this, such an arrangement seems most likely (Tytus (1903) p.14).

80. Garstang (1908) p. 135.
81. Ricke (1944) p. 94.
82. This was vaguely mentioned by Peet and Woolley but was not pursued as an idea (Peet & Woolley (1923) p. 38).
83. Ricke (1944) p. 89, and plan 90.

FOOTNOTES TO CHAPTER II

1. Henne (1924) p. 10.
2. Henne (1924 and 1925), Guéraud (1929) and Alliot (1933 and 1935).
3. Bruyère et al. (1937) Michalowski et al. (1938 and 1950).
4. Michalowski et al. (1938) p. 7.
5. The height of the Islamic and Byzantine levels varied between 20 - 25 m in the central part and 13 - 18 m on either side, while the temenos wall was only 12 m (Henne (1924) p. 2), so the settlement towered above this and was on a level or above the roof of the first hypostyle hall. The question of how quickly the tell increased in height will be looked at later, since there is some variation between the different sections.
6. Alliot (1935) p. 3. However, house H" excavated by Guéraud had Ptolemaic basements (Guéraud (1920) pp. 8 - 15 and especially pp. 14-15).
7. Michalowski et al. (1938) p. 22.
8. Bruyère et al. (1937) pp. 19-23.
9. Michalowski et al. (1938) p. 7.
10. Michaelowski et al. (1950) p. 126.
11. Bruyère et al. (1937) pp. 87-92 and Michalowski et al. (1938) p. 2.
12. Bruyère et al. (1937) pp. 87-92.
13. Despite frequent attempts to find a point of overlap between these two successive excavations, it has not been possible to do so and it seems that there was a small gap between the two areas; overall views in the same various reports seem to indicate the same as does personal observation (Bruyère et al. (1937) pl. VI, No. 1 and Alliot (1933) pl. 11, No. 4 and (1935) pl. V, No. 1).
14. This problem is not restricted to this house and will be taken up again when discussing 'la maison du nord'.
15. Bruyère et al. (1937) p. 89.

16. Bruyere et al. (1937) pp. 88-89.
17. Bruyere et al. (1937) p. 92.
18. Bruyere et al. (1937) p. 89.
19. Michalowski et al. (1950) p. 159.
20. Bruyere et al. (1937) p. 91.
21. Michalowski et al. (1950) pp. 114-115.
22. Michalowski et al (1938) pp. 6-11.
23. e.g. Nowicka (1969) pp. 127.
24. Michalowski et al. (1938) p. 11.
25. Gueraud (1929) p. 12 gives the height as 3.05 m, but on p. 14 as 3.55 m.
26. Alliot (1933) p. 8 and figure 10, p. 7.
27. Alliot (1933) p. 8 and Figure 12, p. 9 and 10.
28. Michalowski et al. (1938) p. 10 and reconstruction on p. 10.
29. Yeivin (1928) p. 52 & 57.
30. Michalowski et al. (1938) p. 5.
31. Michalowski et al. (1938) p. 5.
32. Michalowski et al. (1938) p. 6. 'on a du l'abandonner assez subitement sans même évacuer tout le mobilier.'
33. Not the colossal storage vessels found in house 'a' at Elephantine (Honroth et al. (1909) p. 20) but small, squat types of amphorae and jars used to store grains, which are easily portable (Michalowski et al. (1938) p. 11).
34. It is worth remembering that, by the 6th century AD when Byzantine building began, these Ptolemaic structures were about eight hundred years old and in the four centuries of complete abandonment there could have been much natural decay of the brickwork, which could account for the absence of the upper storey(s). In house H", there were Byzantine constructions on the Ptolemaic base and there is no knowing whether any unsafe Ptolemaic walls had been destroyed to

allow this.

35. Michalowski et al. (1938) p. 26.
36. cf. the six amphorae in 'la maison du nord'.
37. Michalowski et al. (1950) plan V.
38. Michalowski et al. (1950) plan V.
39. By Henne (1924 and 1925), Guéraud (1929) and Alliot (1933 and 1935) who all excavated on the part between the temple and that looked at by Bruyere and Michalowski.
40. The start of the Byzantine period was dated by Alliot to AD 391 and 392 when there was a series of three edicts relating to the closure of pagan shrines and temples, the Edict of Milan in February 391 issued by Theodosius I and renewed in June 391 by Aquillus and the Edict of Constantinople in November 392 issued by Theodosius (Alliot (1933) p. 4, fn. 2).
41. Boak (1935) plan XIII, section E-F, west side gives the depth of coverage of IV 401.
42. Boak (1935) p. 17.
43. Husselman (1979) p. 26.
44. Holscher (1954) p. 34.
45. Alliot (1933) p. 11.
46. Michalowski et al. (1950) p. 159.
47. See above pp. 55-56.
48. Boak (1955) p. 165.
49. Alliot (1935) pp. 3-6.
50. The period of occupation does not appear to have been very long. No documents or papyri were found datable to later than the 7th century AD, and a brief rather scant settlement fits in quite well with the evidence.
51. Michalowski et al. (1938) pp. 23-24.
52. Michalowski et al (1950) pp. 154 & 156, Figs. 102-103.
53. Guéraud (1929) pl. IX.

54. Guéraud (1929), pp. 8-15.
55. A Middle Kingdom model found in the pharaonic cemetery at Edfu, which was 10 cm high and 16 x 17 cm but incomplete, shows either storage chambers or possibly basements. It shows two vaulted rooms, enclosed by a wall and proves that vaulted chambers were standard from early on at this site. (Michalowski et al. (1938) p. 122 and Pl. XLII, 1).
56. See below pp. 325 ff.
57. Alliot (1933) p. 3, mentions a rise of 2 - 3 m between the Roman and Byzantine levels in the area he excavated.
58. For example see the late Old Kingdom layers in the north-west of the settlement. Kaiser et al. (1972) pp. 178-182.
59. Honroth et al (1909).
60. See above, fn. 32 in ch. I.
61. Kaiser et al. (1972) pp. 170-172.
62. Kaiser et al. (1970) Abb. 7, p. 120.
63. Honroth et al. (1909) Tafel III.
64. Honroth et al. (1909) p. 20.
65. Honroth et al. (1909) p. 34.
66. Newberry (1893b) pl. XVII.
67. Kaiser et al. (1980) p. 272 (plan), p. 274.
68. These latter are the successors of the administrative building K44.
69. Honroth et al. (1909) p. 49-50.
70. Kaiser et al. (1970) pp. 125-130.
71. Kaiser et al. (1970) p. 127.
72. Haeny writes (1970) p. 127 "Zudem scheint mir fraglich, ob der im Plan von HONROTH eingetragene Zugang aus Raum 198 wirklich vorhanden war. Die Trennwand konnte, wie die gegenüberliegende Aussenwand des Hauses, von der Grabungsarbeitern durchschlagen worden sein, als sie sich

einen bequemeren Weg für den Schüttransport anlegten".

73. Kaiser et al. (1970) p. 128. One curious feature about 19A was the remains of a lattice of branches and reeds to support the ground level floor, which was probably wood and Haeny wondered whether the ceiling was flat instead of vaulted.
74. Kaiser et al. (1970) p. 129.
75. Kaiser et al. (1970) p. 130.
76. Kaiser et al. (1970) pp. 132-133.
77. Kaiser et al. (1970) pp. 124 and 130-132.
78. Kaiser et al. (1970) p. 132, see also, pp. 198 ff.
79. Kaiser et al. (1970) p. 120.
80. Kaiser et al. (1970) p. 120.
81. Kaiser et al. (1970) p. 120.
82. Kaiser et al. (1972) pp. 174-176 and see overall plan of site in Kaiser et al. (1974) p. 66.
83. Kaiser et al. (1972) pp. 176-177 and Abb. 3 in Kaiser et al. (1974) p. 83.
84. Kaiser et al. (1974) Abb. 3.
85. Kaiser et al. (1972) p. 177.
86. Kaiser et al. (1974) Abb. 3.
87. See below, pp. 184 ff.
88. When Denon visited Edfu in 1802 he reported that the temple was being used for stables and shops, so it must still have been in quite good repair (Denon (1807) pp. 21-22 & pl. XXXV in volume II).
89. Grossmann (1980) & Kaiser et al. (1970) pp. 99-101.
90. Porter and Moss (1934) pp. 165-169.
91. Roeder (1959).
92. Because of the continued occupation on the old town site,

it is difficult to know the precise extent to Edfu at any period.

93. Figures taken from C.P. Hermopolis 101 and see Roeder (1959) p. 107.
94. Roeder (1959) p. 148. The house model in the tomb of Amenemhet probably showed a building from this city and hints that conditions even in the XII dynasty were crowded and similar to those in the Byzantine era.
95. Gabra (1941). It is interesting to note similarities between the 'temple' tombs at Tuna el-Gebel, such as that of Petosiris and the contemporary hellenistic temples like that from Tafa (Roeder (1911) tafel 137), although Tafa does not have the columned portico. Other tombs, (e.g. 1, 4, 5 & 10) at Tuna el-Gebel (Gabra (1941) pls. XX, XAV & XXV & XXVII) imitate the half-open front of hellenistic temples, as seen at Dendera, Esna, Edfu & el-Dakka (Roeder (1913) tafel 1 & 6).
96. Even where the actual construction methods are Egyptian, the internal decoration is either completely Greek in style, with bands of imitated marble covering, or a mixture of this and more traditional Egyptian styles as in house 21.
97. Gabra (1941), ch. V, pp. 45-50 and plates VIII-XVII.
98. Gabra (1941) plates X and XIII, figure 2.
99. Gabra (1941) pp. 67-72 and plates XXXI-XXXV.
100. Gabra (1941) p. 90. (no plan).
101. Gabra (1941) pp. 79-80 and plates XXXIX & XL (the colonnade has been restored).
102. Wiegand & Schrader (1904).
103. e.g. Noshy (1937) p.55.
104. Gabra (1941) p. 100 and pl. XLVII.
105. Gabra (1941) p. 2.
106. Hölscher (1954) p. 34. Note especially that there was evidence of clearance work by the sebbakhin during this period of abandonment.

107. Hölscher (1954) pp. 38-9 and (1934) pl. 10.
108. Hölscher (1954) p. 39.
109. Hölscher (1954) p. 39 and (1934) pl. 10.
110. Nelson & Hölscher (1931) pp. 50-56, Hölscher (1954), pp. 45-51 and (1934) pl. 32.
111. Nelson & Hölscher (1931), p. 53.
112. Nelson & Hölscher (1931) p. 53.
113. Hölscher (1958) p. 67.
114. Such as houses 8, 29, 30, 37, 41, 77, 78, 86, 92, 112, 113 and 122. See also pp. 115 ff.
115. Hölscher (1954) pl 44, houses b - c, g - h and l - m.
116. Hölscher (1954) p. 46.
117. Winlock & Crum (1926) ^{Part. I.} ch. 1, pp. 3-25.
118. Bisson de la Roque & Clère (1929) p. 19.
119. Bisson de la Roque & Clère (1929) p. 19.
120. Bisson de la Roque (1927) pl. III.
121. Bisson de la Roque (1930) pl. I.
122. Bisson de la Roque (1930) pp. 24-25.
123. Lyons (1896) pt. III.
124. Lyons (1896) plan I.
125. Engelbach (1931) figure 1 and Nowicka (1969) figure 64.
126. Nowicka (1969), figure 67 and Davies (1928) figure 2.
127. For a discussion of these generally, see Grimal (1939) and specifically in Egypt, Luckhard (1914) pp. 71ff.

1. This ^{occupation} occurred in the XII dynasty and was ^{possible building of} made ^{by} gates at el-Lahun ^{which} controlled the flow of water into the basin when the Nile was in flood. Following this achievement in the reign of Amenemhet I, there was some settlement under Amenemhet III above the 17.5 m level (metres above sea level), which was the maximum height the lake was allowed to reach and evidence of habitation has been found at Medinet el-Faiyum, (a XII dynasty temple of Sobk) and Tell Umm el-Breigat (inscribed blocks from a temple of Sesostriis III). Contemporary with these were the royal tombs just outside the Faiyum basin on high land to the east at Hawara, at el-Lahun with its workmen's village (discussed above pp. 8-11) and at 'Gurob' (Kom Medinet Ghurab) which was re-used by Thutmosis III for his harim. Some occupation of the Faiyum basin continued until an indefinite date (probably between 5th and 3rd centuries BC) when the water source into it was cut and the level of water within the area fell continuously until it was at a level of less than 3 m. It was from this point that the Ptolemaic work commenced, draining the land available and extending irrigation into nearby parts of the desert. (Boak (1926) & Porter Moss (1934) pp. 96-104)
2. Rostovtzeff (1922) p.
3. Grenfell, Hunt and Hogarth (1900) pp. 27-29 (the town) and 30-32 (the temple).
4. Boak & Peterson (1931), Boak (1933).
5. Boak (1933) pp. 19-55 but especially pp. 35-42 dealing with houses used in the temple service.
6. Husselman (1979) maps 1, 4 and 5.
7. Husselman (1979) p. 10.
8. Husselman (1979) map 5.
9. See above, pp. 96ff.
10. Husselman (1979) p. 10.
11. The method used by the Michigan team is to indicate a floor below that marked on the plan (usually ground level) by putting letters after the number of the house, e.g. E107J/L, so assuming J to be ground level, this makes L a basement. It is possible to tell the number of floors a

house had where there is a staircase, since the number of flights of stairs are indicated in the same way. If, therefore, there is only one flight of stairs or none at all, this means that the house consisted solely of a ground and basement level, like houses E107 and E109, with the basement entered from the room above through a trap door in the floor.

12. Husselman (1979) map 9 for an overall picture of level C, map 14 for level B and map 9 for A.
13. Husselman (1979) pp. 29-31.
14. There are houses in this level, which are simpler still than those described here, consisting just of two parts, one of which was taken up by the staircase, leaving just one room on each level for habitation, e.g. C23, C109. These two houses do not appear to have had any courtyard space associated with them, unlike C424, which had a substantial open space (about 7 x 7.5 m) to the north of the house.
15. C472, map 13 (Husselman (1979) forms a slight variation to this group, since although it consists of three parts the stairs were placed in the back third rather than in the central .
16. These are as follows (taken from maps in Husselman (1979)):
 - Map 10: C191, 126
 - Map 11: C158, C128, C129, C93, C86 (house part), C108, C54, C53
 - Map 12: C62, C66, C27, C4, C6, C10, (inset F9, C99, C98, C211)
 - Map 13: C418, C412, C427, C454, C457.
17. Husselman (1979) map 11, F10.
18. Husselman (1979) map 11, F10.
19. In the case of C88, it was not just a passage, but an entirely separate room.
20. Husselman (1979) C146, map 11, H11 and C454, map 13, H7.
21. It might prove useful to list the standard characteristics of these two types of house for reference and comparison:

Type I - example C5033
(map 11, G11) Plan XLVII

Type II - example C412
(map 13, H8) Plan XLIX

a. Rectangular shape	Square shape
b. Three reasonably equal sections	Two equal sections
c. Centre part usually sub-divided	Back part sub-divided
d. Entrance in front section	Entrance in front section
e. Stairs in central third	Stairs in one-half of back section
f. Passageway through part of central third connecting front and back rooms	Sometimes connection between all three rooms - not always
g. Usually several storeys	Usually several storeys
h. Common variant of type - front third made into courtyard, e.g. C102 (map 11.G10)	

22. Husselman (1979) map 11, H11 and see above, pp. 57, *plan XXX.*
23. Husselman (1979) map 12, F10.
24. Husselman (1979) pp. 9 and 21-26 and maps 14-18.
25. Boak (1955) p. 161.
26. For instance BA237 in G11, map 16, where in level C there had been a large granary complex and houses C122 and C124, CS130 and C93, 129 and 128 (G11, map 11), (Husselman (1979)).
27. Husselman (1979) map 18.
28. Husselman (1979) p. 26.
29. Husselman (1979) map 21, G11.
30. Each house measured about 16.5 x 9 m and consisted of six rooms, one of which held the staircase. One of the problems of level A was that little more than the foundations remained making it difficult to establish the position of doors, let alone windows or niches. This in turn has repercussions in deciding the function of the various rooms and similarly further floors, other than basements remained unknown. For A165, see Husselman (1979) map 21, G11, similarly for A158 and 159.
31. Husselman (1979) map 21, G11 and see plan LXVIII with that of the house from Medinet Ghoran. (Plan LXVII.)

32. Boak (1935) p. 3.
33. Grenfell et al. (1900) pp. 23 & 25.
34. Grenfell et al. (1900) p. 19.
35. Zucker visited the site twice, excavating the second time in the area of the temple of Sobek, where he discovered closely-packed priests' houses made of sun-dried mud brick (Zucker (1910) p. 183).
36. Boak (1935) pp. 15-21.
37. For Philadelphia, see Viereck and Zucker (1926) pp. 2-3, where, however, it is not actually queried why there were no basement levels. For Euhemeria, see Grenfell et al. (1900) p. 43.
38. Boak (1935) p. 19.
39. Maehler (1983) pp. 122 & 124 believes that the stone construction of these two buildings is reminiscent of houses from northern Greece or Olynthos as would be expected in one of the early Faiyum settlements. It does not resemble the plan of a building from Olynthos (Robinson and Graham (1938) pls. 85 & 89), rather it follows very closely the layout of 'la maison centrale' at Edfu and so conceivably forms the first example of a mixing of Greek construction techniques with indigenous types of housing, although stone was readily available near Soknopaiou Nesos and probably formed the easiest building material (Boak (1935) p. 19). It is not like house D6 at Philadelphia, which represents a Greek style building condensed into compact Egyptian style (Noshy (1937), p. 59) and so it is far more likely that IV 401 was built of stone for economic reasons.
40. This can be seen on plan XIII, section E-F, west side of Boak (1935) where it is evident that III 301 was constructed fairly quickly above the ruins of IV 401 as not much debris had accumulated.
41. Boak (1935) p. 17.
42. Boak (1935) p. 18.
43. As can be seen in the first and late first levels, this was indeed the situation in house I 103 (Plan LX.)
44. Boak (1935) pp. 15 & 18.

45. See above pp. 64 + 96.
46. Boak (1935) p. 18.
47. Boak (1935) p. 14 and grid reference G-H8.
48. Boak (1935) p. 12.
49. The area they chiefly investigated was on the north side of the Faiyum, continuing northwards from Karanis and to the east and west as well. They did not discover only the houses to be discussed, but these were the only three published in detail; the position of the others can be seen on map LXXXVII of Caton-Thompson and Gardner (1934). The houses to be described were those on canal G, near section 24, making them about 2.66 km from the closest part of the Birket Qarun (see p. 145) and they seem to have formed a small hamlet centred on the irrigation canals, since there were six mounds close together with houses on them.
50. Although this rise in floor level was interpreted as showing a break in occupation and the excavators recognised two distinct floor levels in some of the older rooms, but this too, could be accounted for by a long spell of continuous use.
51. Caton-Thompson & Gardner (1934) p. 148.
52. Caton-Thompson & Gardner (1934) p. 148.
53. Houses at Priene were usually entered directly from the street, but a long corridor led up the side of the house into the courtyard, which was the centre of the domain, e.g. house XXXIII in Wiegand & Schrader (1904) p.285. But there were some examples, like House XXXV, XXVI and XIII where one entered directly into the court, with the living rooms all round (Wiegand & Schrader (1904), pp.288 & 295). It is possibly this latter case that this house 3 is similar to although the unmarked entrance room could be thought of as the entrance corridor.
54. Wiegand & Schrader (1904) pl.297.
55. Some stones had been removed, as mentioned in Caton-Thompson & Gardner (1904), p.148.
56. See list of finds, Caton-Thompson & Gardner (1934), pp. 148-149.
57. Vitruvius. De architectura Bk. VI ch. VII.

58. It is worth mentioning that there is thought to be similarity between the contemporary Greek style houses in Alexandria and the form of the tombs in the Alexandrian necropolis. In the cemeteries contemporary with this group of houses from the Faiyum, i.e. early to mid 3rd century BC, the type of house in vogue was that from Priene and tombs reflecting this kind of plan are to be found at Shatby, Anfuchy and Sidi Gaber cemeteries (Noshy (1934) pp. 47 ff).
59. By comparison, the houses in the workmen's village at el-Amarna were a standard 10 x 5 m, and the individual measurements of the rooms were roughly 2.6 x 5 m for the front, 3.6 x 5 m for the middle third and about 2.3 x 5 m for the back, so even these tiny houses were considerably larger than the individual complexes here.
60. Caton-Thompson & Gardner (1934) p. 148.
61. Viereck (1928) and also the introduction to Viereck & Zucker (1926).
62. Viereck & Zucker (1926) p.2.
63. It is interesting that the basements at Philadelphia correspond in several ways to those from Edfu. First they are constructed at ground level, causing the house to be entered from first floor height; secondly the basements were covered with barrel vaults, which it is recorded (Viereck & Zucker (1926) p. 6) were about 2.60 m high; that of 'la maison centrale' at Edfu was about 2.80 m as were those in 'la maison du nord'. The fact that these houses at Philadelphia were entered up a flight of steps leading to the first floor provides further evidence that 'la maison du nord' as excavated was the basement level of a house and not the house itself (see above, p. 63).
64. Viereck & Zucker (1926), pp. 2 & 4.
65. Noshy (1937) p. 59.
66. Viereck & Zucker (1926) p. 5.
67. This conception is based upon the passage in Vitruvius De Architectura, Book VI, ch. VII, 2 where he talks about the 'women's quarter, gynaeconitis' and then later in VII, 4, about the 'andrones, the men's quarters'. Despite this definite division, none of the excavations at Olynthos, Priene or Delos discovered any arrangement which fitted Vitruvius' description and all the excavators concluded

that the 'gynaecoonitis' was to be found on an upper storey, as was presumably the case with this house at Philadelphia. (Robinson & Graham (1938), Wiegand & Schrader (1904), Chamonard (1924).

68. Jouguet (1901).
69. Jouguet (1901) p. 393, fig. 8.
70. Jouguet (1901) pp. 391-392.
71. Jouguet (1901) p. 391.
72. Jouguet (1901) p. 392.
73. Jouguet (1901) p. 391.
74. In houses where the stairs went up in a straight line, as at the workmen's villages at el-Amarna and Deir el-Medina, a separate wall divided them off from the main room so that they could not be seen. There was no such separating wall here, which makes the likelihood of them belonging to the first phase of the house even more remote.
75. e.g. Noshay (1937) p. 56.
76. Jouguet (1901) p. 393.
77. See below, pp. 237-239.
78. Peterson's notes p. 670.
79. Karanis record of objects 1924-25,, pp. 169-172.
80. According to Peterson (Peterson's notes, p. 668) [and ~~this is~~ ^{a view} therefore, perpetuated by Husselman (1979) p. 27], the house measured just over 7 m²; but this appears to be a mistake, since such a house could not be remarkable, and it is described as 'rather large' by Peterson. It seems far more likely to have been 17 m² and this agrees with measurements taken from map 23 in Husselman (1979).
81. Noshay (1937) p. 56.
82. Rubensohn (1905).
83. Robbers had entered the building shortly before Rubensohn excavated it and in so doing, had destroyed the entrance in the west side and possibly some rooms on the east as well, but other than this, the plan of the ground floor is quite

clear (Rubensohn (1905) p. 5). Luckhard reckoned the area of the house as above 204 m² and the basic measurements are 16.6 x 11 m (not including the north-east room) (Luckhard (1914) p. 21).

84. Rubensohn (1905) pp. 12 & 13.
85. Rubensohn (1905) p. 14 and see below, pp. 363-364.
86. Rubensohn (1905) pp. 15-16.
87. Rubensohn (1905) pp. 5-6.
88. Yeivin (1928), p. 163
89. Rubensohn (1905) pp. 7-8. See below p. 363.
90. Noshy (1937) p. 55.
91. Vitruvius, De architectura, Bk. VI, ch. VII, 3.
92. Chamonard (1922) p. 170.
93. Chamonard (1922) p. 172.
94. Rubensohn (1905) p. 4.
95. It should be noted that the area designated as a courtyard in the first house dealt with, also had a niche in one wall, the east, and in the 'Maison de la Colline' at Delos, there was a niche at each end of the 'pastas', which was open to the sky, so possibly this was reasonably common in Greek houses.
96. If one connects the original end of the south wall of the north-west room and the west wall of the small south room, this might indicate the line of an original wall as they connect easily, and a wall along this line would have allowed easier access to the northern rooms, although the thick western wall of the south room (1 m) remains unexplained.
97. Grenfell et al. (1900) pp. 11 and 63 and plate X, Schwartz & Wild (1950).
98. Schwartz & Wild (1950) p. 3.
99. This is dealt with in Schwartz & Wild (1950) pp. 63-72, and Schwartz (1969) pp. 1-23 and 27-46.

100. Schwartz & Wild (1950) Fig. 3, p. 11.
101. The evidence for the late construction of most of IV comes from the slight overlap of the south-east corner of room 2 of IV with the north-west one of V.
102. Schwartz & Wild (1950) p. 12, fn 3.
103. Schwartz & Wild (1950) pp. 35-38 and pl. XI. This is all assuming that such deductions from the ground plan can be taken as at all valid.
104. Schwartz & Wild (1950) p. 52 fn. 1 and fig. 10, p. 53.
105. Nelson & Hölscher (1931) p. 50 and Hölscher (1932) p.46.
106. See ch. 1, pp. 39, 35+36.
107. e.g. Engelbach (1931) especially Fig. 3.

FOOTNOTES TO CHAPTER IV

A. Walls

1. These models differ from those mentioned in chapter I (from the tombs of Meketre and Amenemhet) in that their primary purpose was not always funerary, but they were sometimes used as a cover for lamps, e.g. Engelbach (1931) figs 1 & 2 and Breccia (1933) pl. XII, 38 number 23093.
2. Davies (1928).
3. Interesting evidence on the construction of an entirely new village at Sheikh 'Abd el-Qurna comes from Fathy (1969), whilst the work of Lozach & Hug collecting information on housing throughout Egypt in the 1920s provides very useful parallels (Lozach & Hug (1930)).
4. By Petrie (1938), Clarke & Engelbach (1930), Vandier (1955), Jequier (1924) and most recently and dealing thoroughly with brick architecture, Spencer (1979).
5. As none of the structures being investigated was constructed substantially in a material other than mud brick, it is not proposed to deal with buildings which were made of reeds, thatch and clay and therefore also with the immediate forerunner of mud brick - pisé. Good discussions of these early huts and buildings are to be found in Badawy (1951) pp. 1-28 and Ricke (1932) pp. 7 ff. The flimsy reed huts, of which Hölscher found traces at Medinet Habu, are interesting examples of the continuing use of these techniques (Hölscher (1939) p. 71), as is the description by Diodorus of shepherds' huts in the 1st century AD (Lucas & Harris (1962) p. 48).
6. Lucas & Harris (1962) p. 49.
7. Fathy (1969) p. 252.
8. Spencer (1979) p. 3-4.
9. Reil (1913) p. 40. The prices /10,000 bricks given in the papyri are as follows:

III century BC	80 s.dr.	p. Petrie III, 46(3)(4)
IV century AD	⅓ solidus (unbaked)	

1½ solidus (baked)

6¼ solidi

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10. Spencer (1979) p. 140.
11. Bruyère (1939) p. 23.
12. Hölscher (1939) p. 71.
13. Kaiser et al. (1972) p. 179.
14. Alliot (1933) p. 5.
15. Kaiser et al. (1970) p. 122.
16. Kaiser et al. (1976) pp. 107 ff & (1977) pp. 95 ff.
17. Husselman (1979) p. 7.
18. Husselman (1979) pp. 9 & 33.
19. Yeivin (1928) pp. 2-4.
20. Yeivin (1928) pp. 1-2.
21. Yeivin (1928) pp. 1-2.
22. Size of bricks will be discussed below (p. 167) but Ptolemaic bricks from the Faiyum varied between 36 x 16 x 13 cm from Philadelphia (Yeivin (1928) p. 7) to 29 x 14 x 11 cm from house II 201 at Soknopaiou Nesos (Boak (1935) p. 11), so if Yeivin's statement is to be taken as connecting this class with bricks in Ptolemaic buildings, there is a notable discrepancy in size.
23. Yeivin (1928) p. 3.
24. Yeivin (1928) p. 3.
25. Yeivin (1928) p. 4.
26. Zucker (1910).
27. Rubensohn (1905) p. 1.
28. Spencer (1979) p. 147.
29. Spencer (1979) p. 147.

31. Spencer (1979) plates 41-43.
30. Spencer (1979) p. 147.
32. Spencer (1979) pp. 140 ff.
33. The specific bricks used for the study are given below:-

a. FAIYUM

<u>Dimensions in cm</u>	<u>Town</u>	<u>Source</u>
<u>Ptolemaic</u>		
31 x 14.5 x 10.5	Karanis	Husselman (1979) p. 33.
36 x 16 x 13	Philadelphia	Yeivin (1928) p. 7.
36 x 13 x 11	Tebtynis	Yeivin (1928) p.
30 x 15 x 11	Soknopaiou Nesòs	Boak (1935) p. 11.
29 x 14 x 11	Soknopaiou Nesos	Boak (1935) p. 11.
<u>Roman</u>		
25 x 10-15 x 10-13	Karanis	Husselman (1979) p. 33.
26 x 13 x 10.5	Karanis	Yeivin (1928) p. 3.
26 x 13 x 9.75	Karanis	Yeivin (1928) pp. 3 & 5.
27 x 13 x 11	Karanis	Boak & Peterson (1931) p. 8.
<u>Later Roman</u>		
25.5 x 12.5 x 10	Karanis	Yeivin (1928) p. 3.
25.5 x 12.5 x 9.5	Karanis	Yeivin (1928) p. 3.
28 x 14 x 11	Karanis	Yeivin (1928) p. 3.
24 x 11 x 11	Karanis	Yeivin (1928) p. 3.

b. NON-FAIYUM I

<u>Dimensions in cm</u>	<u>Town</u>	<u>Source</u>
<u>Ptolemaic</u>		
30 x 15 x 10	Edfu	Alliot (1935 p.
34-6 x 12-17 x 10-16	Edfu	Bruyère (1937) p. 87.
34-5 x 16 x 10	Edfu	Bruyère (1937) p. 89.
32.5 x 15.5 x 11.5	Edfu	Bruyère (1937) p. 28.
34 x 17 x 11	Edfu	Michalowski (1938) p.7.
42 x 22 x 10	Elephantine	Kaiser et al. (1970) p. 123.
<u>Roman</u>		
33 x 15-18 x 7-11	Hermopolis	Roeder (1959) p. 11.
30 x 12 x 8	Hermopolis	Roeder (1959) p. 11.
32 x 14 x 10	Medinet Habu	Hölscher (1954) p. 36.
30 x 15 x 9	Medinet Habu	Hölscher (1954) p. 36.
31 x 15 x 8	Armant	Mond & Myers (1934) p. 181.
31 x 12 x 9	Armant	Mond & Myers (1934) p. 182.
29 x 14.5 x 9	Armant	Mond & Myers (1934) p. 181.
33 x 15 x 7	Armant	Mond & Myers (1934) p. 182.
35-6 x 16-17 x 12-13	Edfu	Alliot (1933) p. 12.
30 x 15-16 x 10-11	Edfu	Alliot (1933) p. 12.
15 x 12 x 11-12	Edfu	Alliot (1933) p. 12.
33-8 x 15-17 x 11-12	Edfu	Bruyère (1937) p. 83.

Coptic

29 x 17.5 x 14	Madamud	Bisson de al Roque (1925) p. 24.
30-31 x 14-15 x 6-7	Djeme	Hölscher (1954) p. 45.
30-32 x 15-16 x 7-8	Edfu	Alliot (1933) p. 4
32 x 16 x 7	Edfu	Bruyère (1937) p. 64.
30.5 x 13.5 x 6-7	Edfu	Bruyère (1937) p. 62.

c. NON-FAIYUMIC II

All taken from Archaeological Journal XI (1883) p. 108 (a note given by Petrie). The measurements were originally in inches and were converted into centimetres.

44.25 x 22 x 13.5	Hawara, XII dynasty
43.75 x 22.25 x 13	Memphis, XVIII dynasty
37.5 x 17.75 x 8.85	Giza, Greek
36.75 x 17.25 x 14.25	Memphis, late Greek/Roman
34.75 x 16 x 13	Memphis, late Greek/Roman
30.5 x 15.75 x 12.75	Memphis, Greek
30.25 x 14.25 x 9.25	Giza, Greek
45.75 x 21.75 x 12	Kom Fares, Roman
30 x 14.25 x 9.5	Dendera, late Roman
26.25 x 13 x 0.25	Giza, late Roman
23.25 x 12.25 x 7.5	Memphis, Christian
24.5 x 11.75 x 8.25	Memphis, Roman
20.5 x 11.5 x 8.5	el-Hiba, Roman
18.25 x 9.75 x 7	Faiyum, Arab dyke (baked brick)

d. PHARAONIC

Dynasty

XVII	32 x 16 x 10	el-Malqata	Tytus (1903) p. 12.
	30-33 x 15-16 x 8-8.5	Medinet Habu	Hölscher (1939) p. 69.
	33-36 x 15-16 x 9	el-Amarna	Frankfort & Pendlebury (1933) p. 98.
	33-36 x 15-16 x 9	el-Amarna (T.34.3)	Peet & Woolley (1923) p. 66.
XX	35 x 17 x 11	Medinet Habu	Nelson & Hölscher (1934) p. 101.
XXI	27 x 15 x 7	Karnak	Anus & Sa'ad (1971) p. 219.
XXV	28 x 14 x 8	Medinet Habu	Hölscher (1932) p. 40.
XXV-XXVI	29-30 x 14-15 x 8	Medinet Habu	Hölscher (1954) p. 14-15.
XXVI	33 x 14 x 9	Karnak	Anus & Sa'ad (1971) p. 219.
	30 x 14 x 9	Karnak	Anus & Sa'ad (1971) p. 219.
	35 x 15 x 10	Karnak	Anus & Sa'ad (1971) p. 219.
	34 x 16 x 11	Karnak	Anus & Sa'ad (1971) p. 219.
XXX	38.5-40 x 19 x 12-13	Saqqara	Spencer (1979) p. 98.
pre-Ptol.	33 x 15 x 7-8	Hermopolis	Roeder (1959) p. 11.
	40 x 17-18 x 7-9	Hermopolis	Roeder (1959) p. 11.
	36 x 14-15 x 6-7	Hermopolis	Roeder (1959) p. 11

e. NAUCRATIS

These came from Petrie (1886) p. 89 and were initially given in inches, but were changed to centimetres.

Date

350 BC	35.5 x 17.5 x 12	House
200 BC	35 x 17.75 x 11.5	House
200 BC	35.25 x 17.5 x 11.25	House, east of town
200 BC	34 x 17.25 x 12.75	House
100 BC	35 x 17.5 x 12.5	House, north-west of Temenos
30 BC	36.5 x 17.75 x 12.5	House, north-west of Temenos
30 BC	35.25 x 17.5 x 12.5	House, north-west of Temenos
150 AD	29.5 x 14.25 x 10	House, burnt

The intention of the statistical tests which were carried out on each ratio was to compare the bricks in the different groups, as listed above, to see whether there were any differences in shape between groups which could be regarded as real. In doing this, two things were investigated for each ratio, the variability within the groups and the differences of means between the groups. The analyses were carried out on the logarithms of each ratio in an attempt to make the variability within groups sufficiently uniform for the Analysis of Variance (Anovar) to be used.

The first ratio looked at was length:height and the first group was a - Faiyum sites. Variability was investigated first, since the results of tests on this determine how the mean can be studied, as if the variability is the same, then the Analysis of Variance can be used but if not, then the procedures for comparing the means are more limited. For the Faiyum group, therefore, the ratios were studied for the periods within the group (Ptolemaic, Roman and late Roman) and because the variability within each of these periods was roughly the same, the Anovar test could be used to compare the mean ratios of the three periods, which also turned out to be the same, showing that the bricks belonged to a fairly uniform type.

This was repeated for group b - non-Faiyum, with the same results throughout. To compare the means of these two groups, a and b, it was necessary first to look at the variability. This was not the same for these two groups, ruling out the use of Anovar, so instead the Fisher-Behrens test was used which compares the means of two groups only, which showed that the mean ratios of groups a and b differed, indicating two separate types.

The procedure was done for groups c, d and e, treating each of them as a single group (not divided initially into three as for a and b) except that the three bricks from Hermopolis stood out significantly and were taken as a small separate group, making six in all. The mean ratios for all the groups could then be compared using Fisher-Behrens test.

The same was done for the width:height ratio and similar tests were carried out for length:width. The graphs in Appendix II show clearly how the different groups behaved for the three ratios. (In pocket at back)

34. Petrie (1883) p. 109. This was actually a baked brick, but baked bricks from other parts of the Faiyum, like Karanis did not differ in size very much from the mud bricks and it is probably reasonable to assume that Arab baked bricks likewise did not differ much from the normal mud brick.
35. Petrie (1883) p. 108 and see fn. 33, group c.
36. Luckhard (1914) p. 29.
37. Petrie (1886) p. 89 and fn. 33, group c.
38. One might perhaps speculate that the differences between the Naucratis and Ptolemaic Faiyum groups were due to differences between brick size and shape in the areas the Greeks of the respective Egyptian settlements came from: Milesia for Naucratis and Macedonia in the Faiyum.
39. Spencer (1979) p. 140.
40. Roeder (1959) p. 148.
41. Hölscher (1954) p. 45. Also note the unusual instance at Philae where the walls had been burnt in situ to try and give them greater strength, creating a skin between 1 and 2 m thick which was burnt red, whilst the rest was ordinary brick (Lyons (1896) p. 14).

43. Used in thresholds in Byzantine houses at Edfu (Alliot (1933) p. 4) and Karanis, (Yeivin (1928) p. 5).
42. Bisson de la Roque (1930) p. 23
44. For window sills at Karanis (Yeivin (1928) p. 5).
45. Several examples of baked bricks forming floors at Madamud (Bisson de la Roque (1928) p. 20 & (1929) pp. 15, 17 and passim), at Edfu in Byzantine houses (Alliot (1933) p. 4), Philadelphia (Viereck and Zucker (1926) p. 4), Djeme (Hölscher (1954) p. 50), and finally at Karanis (Yeivin (1928) p. 6).
46. Found in houses at Edfu (Alliot (1933) p. 4).
47. Used for stairs at Bacchias (Luckhard (1914) p. 31) and Djeme (Hölscher (1954) p. 47).
48. Yeivin (1928) pp. 6-7.
49. Yeivin (1928) p. 6.
50. Yeivin (1928) p. 6.
51. These are dimensions of a few baked bricks discovered in the course of preparing this section:-

<u>cm</u>	<u>place</u>	<u>source</u>
<u>generally</u>		
22-4 x 10-11 x 6-8	Hermopolis	Roeder (1933) p. 11.
34 x 17 x 8.5	Armant	Mond & Myers (1934) p. 182.
33 x 16 x 7	Armant	Mond & Myers (1934) p. 182.
31 x 16 x 7	Armant	Mond & Myers (1934) p. 182.
28 x 13 x 7.5	Armant	Mond & Myers (1934) p. 182.
25 x 11.5 x 7.5	Karanis	Yeivin (1928) p. 6.

in floors

- | | | |
|-----------------|---------|---------------------------------|
| 25.5 x 25.5 x 4 | Edfu | Bruyère et al. (1937)
p. 61. |
| 24 x 13 x 3 | Edfu | Michalowski (1938) p. 23. |
| 23 x 23 x 5.5 | Karanis | Yeivin (1928) p. 6. |
52. el-Nassery, Wagner & Castel (1976) p. 242.
53. Spencer (1979) pp. 141-142.
54. Honroth et. al. (1909) p. 18.
55. Fathy (1969) p. 16.
56. Bruyère (1939) p. 25, fig. 1.
57. Alliot (1933) p. 12.
58. The following dimensions have been noted:

<u>cm</u>	<u>place</u>	<u>source</u>
<u>Ptolemaic</u>		
32 x 25 x 6	II 201 Soknopaiou Nesos	Boak (1935) p. 12.
33.5-38 x 18 x 5	'la maison du Nord' Edfu	Michalowski (1938) p. 8.
<u>Roman</u>		
26 x 12.5 x 7.5	level II-I Karanis	Yeivin (1928) p. 4, fig. 1
36-7 x 17-8 x 7	'la maison centrale' Edfu	Bruyère (1937) p. 89.
39-42 x 16-7 x 7-8	Edfu	Alliot (1933) p. 12.
<u>Byzantine</u>		
31 x 17-8 x 5	Edfu	Bruyère (1937) p. 61.
31 x 17 x 8.5	Edfu	Bruyère (1937) p. 62.

Modern

25 x 15 x 5 Nubian masons Fathy (1969) pp. 16.

59. Boak (135) p. 18.
60. Jouguet (1901) p. 388.
61. Lyons (1896) p. 14.
62. Bruyère (1939) pp. 19 & 28.
63. Boak & Peterson (1931) p. 12.
64. Bruyère (1939) p. 27.
65. Kaiser et, al. (1970) p. 122.
66. Schwartz & Wild (1950) p. 10.
67. Yeivin (1928) p. 25.
68. Bruyère (1939) pp. 231-22.
69. Yeivin (1928) p. 13.
70. Bruyère (1939) p. 27.
71. Yeivin (1928) p. 11 and table VI.
72. Tytus (1093) p. 12.
73. Clarke & Engelbach (1930) p. 69.
74. Bruyère (1939) p. 27.
75. Bruyère (1939) p. 27.
76. The information available is scarce, but there does not appear to be any similar development in domestic houses in the XXV dynasty, as occurred in temples which at this time, were given very solid platforms for foundations (Clarke & Engelbach (1930) p. 76).
77. Yeivin (1928) pp. 25 & 69-70.
78. Yeivin (1928) p. 69-70.
79. Viereck & Zucker (1926) p. 3.

80. Husselman (1979) does not mention these stone foundations nor very much about foundations at all, so there is little means of finding out about the foundations in the two Ptolemaic levels.
81. Yeivin (1928) p. 25.
82. Yeivin (1928) p.26. Presumably as the depth of the site grew this must have become more common, although the usable parts of the houses were taken over and extra floors added to these, so that excavating a completely new basement was perhaps not as frequent as it might appear at first sight.
83. Yeivin (1928) p. 35.
84. Yeivin (1928) p. 41.
85. Yeivin (1928) pp. 38 & 39.
86. Kaiser et al. (1970) p. 122.
87. Kaiser et al. (1970) pp. 131-132.
88. Kaiser et al. (1970) p. 133.
89. Kaiser et al. (1974) p. 176.
90. See fn. 76 above.
91. Boak (1935) p. 18.
92. Petrie (1938) p. 7.
93. Spencer (1979) plates 3 & 4.
94. Spencer (1979) p. 138.
95. Peet & Woolley (1923) p. 57.
96. Peet & Woolley (1923) pp. 37 ff.
97. Pendlebury (1951) p. xi.
98. Frankfort & Pendlebury (1933) p. 26.
99. Tytus (1093) p. 13.
100. Hölscher (1954) pp. 5 & 7.
101. Hölscher (1932) pp. 38-40.

102. Roeder (1959) p. 148.
103. Roeder (1959) p. 148.
104. Hölscher (1954) pp. 37-8. The earlier houses were probably not vaulted, since the walls could not have supported the weight whilst the later ones almost certainly were, hence the thicker walls.
105. Spencer (1979) p. 100.
106. Hölscher (1954) p. 38.
107. Spencer (1979) p. 101 & 138. Examples of A3 bonding can be seen in houses 76, 116, 112, 111 & 100 and of C1, house 110. It seems that in some houses a bond like C1 was used for the first few feet of the wall before A3 took over and was standard for the remaining height, as can be seen in 101 and 106. House 99 is reasonably like C3, but does not seem to stick rigidly to it throughout the height of the wall.
108. Bisson de la Roque (1929) p. 33 & fig. 21.
109. Michalowski et al. (1838) p. 7.
110. Bruyère et al. (1937) pp. 87-88.
111. Bruyère et al. (1937) p. 88.
112. Michalowski et al. (1938) p. 7.
113. See pl. VI.
114. Guéraud (1929) p.
115. Alliot (1935) p.
116. Kaiser et al. (1970) p. 132.
117. Kaiser et al. (1970) p. 126.
118. Spencer (1979) p. 138 and plate 5.
119. Kaiser et al. (1970) p. 122.
120. Honroth et al. (1909) p. 18.
121. This latter feature can be seen clearly in some of the plates in Husselman (1979) e.g. plate 8b, 9b, 12b & 13b.

122. Husselman (179) p. 33.
123. Yeivin (1928) p. 42.
124. Yeivin (1928) p. 41.
125. Husselman (1979) p. 33.
126. Yeivin (1928) p. 37.
127. Spencer (1979) pl. 1.
128. In plate 11, Husselman illustrates a section through a wall of this period and it shows the A2 bonding quite clearly, except that space had been left in the core of the wall, so that the bricks from each course only just overlapped to tie the wall together.
129. Yeivin (1928) p. 38.
130. Yeivin (1928) pp. 38 & 77. He describes the wall of 228A, which consisted of twenty-two layers without any definite pattern at all. If I have understood his lettering system as he probably intended it then 'a' stands for headers, 'b' for bricks on end and 'c' for stretchers (but he illustrated a and c in reverse) so the wall went:

c.a.c.b.b.a.c.b.c.c.c.c.a.c.a.b.a.c.a.c.a.c.
131. Yeivin (1928) p. 38, Spencer (1979) pl. 11 & Husselman (1979) pl. 57a & 81a & b.
132. Yeivin (1928) p. 40.
133. Yeivin (1928) p. 42.
134. Boak (1935) p. 17.
135. Spencer (1979) p. 117.
136. This pan bedding is shown on house models of the Graeco-Roman period, which did not come from the Faiyum, although provenance is often unspecified. One, on which the courses are particularly clearly shown, is now in the Cairo Museum (56352) and came from Sakha (Xois) and another is in the British Museum (2462) with no provenance indicated (56352, (Engelbach (1931) figs 1 & 2, and 2462, (Davies (1928) fig. 14 & British Museum (1904) p. 112).

137. Honroth et al. (1909) p. 18.
138. Kaiser et al. (1970) p. 127.
139. Husselman (1979) p. 34 & pl. 14a.
140. Husselman (1979) p. 34 & pl. 14b.
141. Yeivin (1928) p. 44 & Husselman (1979) p. 34.
142. Husselman (1979) pl. 16 & 17a.
143. Boak (1935) p. 11.
144. Boak (1935) pp. 11-12.
145. Rubensohn (1905) p. 1.
146. Boak (1935) p. 18.
147. Boak & Peterson (1931) p. 12.
148. Husselman (1979) p. 35.
149. Husselman (1979) p. 35 & pl. 17b.
150. Jouguet (1901) p. 388.
151. Caton-Thompson & Gardner (1934) p. 146.
152. Caton-Thompson & Gardner (1934) pp. 147 & 148.
153. Spencer (1979) p. 134.
154. Clarke & Engelbach (1930) p. 210.
155. Spencer (1979) p. 135.
156. Frankfort & Pendlebury (1933) p. 52-3.
157. Yeivin (1928) p. 36.
158. The use of rushes was more common in larger walls like the town walls of Buto and Sais (Petrie (1938) p. 8).
159. Lucas & Harris (1962) p. 74.
160. Bruyère (1939) p. 24.
161. Bruyère (1939) p. 24.

162. Tytus (1903) p. 12.
163. Yeivin (1928) pp. 14-15 & Boak (1935) p. 15.
164. Yeivin (1928) p. 15.
165. Yeivin (1928) pp. 15-16.
166. Lucas & Harris (1962) p. 67.
167. Lucas & Harris (1962) p. 67.
168. Lucas & Harris (1962) p. 76.

169. Petrie (1890) p. 24.
170. Peet & Woolley (1923) p. 72.
171. Peet & Woolley (1923) p. 77.
172. Peet & Woolley (1923) p. 90. Although they described it as a lime wash, this is very unlikely (Lucas & Harris (1962) p. 76) and presumably gypsum was meant.
173. Peet & Woolley (1923) pp. 84-85.
174. Peet & Woolley (1923) p. 76.
175. Bruyère (1939) p. 24.
176. Bruyère (1939) p. 24.
177. Kaiser et al. (1970) p. 123.
178. Mond & Myers (1934) p. 181.
179. Holscher (1954) p. 47.
180. Holscher (1954) p. 47.
181. Yeivin (1928) p. 49.
182. Yeivin (1928) p. 50.
183. el-Nassery, Wagner & Castel (1976) p. 242.
184. Clarke & Engelbach (1930) p. 82.

185. Yeivin (1928) p. 16.
186. Maehler (1983) p. 122. See also, fn 39 to chapter III.
187. McKay (1975) ch. IV.
188. Juvenal Satire III, ll. 193-202.
189. Grossmann (1980).

B. Doorways and Doors

190. Koenigsberger (1936) dealt extensively with all the evidence he could find on the Egyptian door, but did not include much material from the newly published excavations at Kom Aushim or the other sites from the Faiyum. A great deal of his evidence comes from tomb representations and actual doors in tombs, which he used to back up the rather slight material remains of doors dating from the pharaonic periods.
191. Badawy (1951) figs 7 & 19.
192. Petrie (1907). Type K, such as illustrated on pl. XVIII, 80, had doors of 'maize' stalks placed close together. An actual such door, made of reeds and then covered with mud is in the Cairo Museum, number 5160 (Koenigsberger (1936) p. 14).
193. Koenigsberger (1936) pp. 4-5 & figs. 1 & 2.
194. Randall-MacIver (1902) p. 42 & pl. X, 1 & 2. The model came from a predynastic grave and had a very distinctive slope from the ground to the roof which is apparently characteristic of buildings made of pisé (Badawy (1951) p. 21).
195. Koenigsberger (1936) p. 28.
196. Petrie (1890) p. 24.
197. Koenigsberger (1936) p. 6. Textual evidence is able to give an idea of the prices of these articles during the New Kingdom. For wooden beams of between 9 and 16 cubits in length, the price varied between 5 and 6 deben each and other prices paid for an unknown quantity of wood included 1 sniw 4 deben (O. Cerny 5, vs 3 in XIX dynasty) and 4 deben (mid XX dynasty in O. Gardiner 158, vs 3), (Janssen (1975) pp. 372-374 & table LXII).
198. Hölscher (1954) p. 5.
199. Kaiser et al. (1970) p. 125.
200. Bruyère (1939) pp. 40-45 & pp. 241-335.
201. Peet & Woolley (1923) p. 37.
202. There are two reasons why the presence of wooden fittings generally, including doors, has on occasion to be surmised.

First, wood was a valuable commodity in Egypt and if the inhabitant of the house could afford it, he would be loath to leave wood behind if he had to move on, as for example at Akhetaten, where many of the former inhabitants took the wooden fittings of their homes with them (Frankfort & Pendlebury (1933) p. 68). At later sites as well, there is evidence of such a removal as at Karanis (Boak and Peterson (1931) pl. VII, fig. 14 and Husselman (1979) pls. 17a, 59 and 71). If any wood were for some reason left behind, it could also have been plundered for use elsewhere and also at some sites, like el-Amarna, any organic materials left, tended to be destroyed by white ants. Despite these problems, through, it is usually possible to infer reasonably accurately where such wooden fittings were intended to go.

203. Tytus (1903) p.14.
204. Petrie (1894) p.11.
205. Anus & Sa'ad (1971) pp. 222 & 230.
206. The door jambs in the entrance to house 1 at Karnak (Anus & Sa'ad (1971) p. 220) appear to have been constructed of a single piece of sandstone, although now broken as can be seen in fig. 171 of Lauffray (1979) and although described by Anus in terms of '*la partie inférieure et supérieure*'. The fact of its being sandstone is unusual, since limestone was preferred for jambs and the lintel, whilst sandstone was, if used, normally kept for thresholds, as occasionally at Deir el-Medina, as in house N.O.XXII, where the threshold was sandstone and the frame of reddened limestone. (Bruyère's form of describing the houses at Deir el-Medina is adhered to throughout, hence N.O. = north-west, S.O. = south-west, N.E. = north-east, S.E. = south-east, C. = central and the Roman numerals refer to the specific house i.e. I, II, III etc. (Bruyère (1939) p. 297)). Further examples of single pieces of stone being used for the jambs are to be found throughout the volumes dealing with the excavations at el-Amarna, for example house M.50.13, illustrated on pl.VIII, of Peet and Woolley (1923), which happens also to be a sandstone frame (Peet and Woolley (1923) p. 42). fig. 3 X
207. For example in house O.49.24 at el-Amarna where there was a slot at each end of the threshold (18 x 5 cm) to hold the wooden door posts (Peet & Woolley (1923) p.30). Similarly in the workmen's village at el-Amarna, whenever the thresholds were of stone, slots were made to take the base of the wooden jambs, although it is possible that these fitted

into small stone cups sometimes found near the jambs, which were presumably sunk into the threshold (Peet & Woolley (1923) p. 59). At Deir el-Medina the method was the same: small slots in the threshold to take the base of the jamb, regardless of the material of either the threshold or the door jambs (Bruyère (1939) p. 45). Unusually there appears to be evidence of mortar being used on one side of a threshold in building D at Elephantine (dating to the second intermediate period) to secure one wooden door post (Kaiser et al. (1977) p.89).

208. Peet & Woolley (1923) p. 59.
209. Peet & Woolley (1923) p. 88.
210. Bruyère (1939) pp. 40-45.
211. Peet & Woolley (1923) p. 5. In their chapter on 'Domestic architecture of Akhetaten', Peet and Woolley mention that on the internal doors in the house of Nakht it appears that only the upper half of the jambs was decorated in colours, while the lower section was white, in keeping with the decoration of the walls, which were white for about the height of a man and were then decorated (pp. 43 & 44).
212. Anus & Sa'ad (1971) p. 220. This was only the case in house I. The jambs in house II were not inscribed, but instead the lintel seems to have been carved in relief (p. 228). Door frames from the other four houses had not survived, but it is worth noting the variety among the door jambs that did remain. Those of the entrance door in house 1 consisted of single pieces of sandstone, those into room B were made of a sandstone veneer over plastered brickwork, as were those in house II, but the door into area B here was moulded into two bands and a filet, making an impressive door (p. 230).
213. Peet & Woolley (1923) pp. 18 & 30. The measurements in cubits were worked out on the basis of 1 cubit = 20.6" as given by Gardiner (1957) p. 199.
214. Frankfort & Pendlebury (1933) p. 64.
215. Peet & Woolley (1923) p. 18.
216. Bruyère (1939) p. 273.
217. Anus & Sa'ad (1971) p. 222.
218. Koenigsberger (1936) p. 8.

- pl. XVIII, 80 illustrated one of these doors.
241. Janssen mentions prices of four doors from the New Kingdom, ranging in price from 1 oipe (mid XX dynasty) to 2 sniw (10 deben) (early Ramesses III) and comments that the presence of paint caused this variety (Janssen (1975) p. 390).
 242. It is interesting to note that in the Amarna talatat from Karnak, false doors are represented in each of the main halls of the three priests' houses portrayed, showing exactly how detailed these illustrations were (Lauffray (1979) fig. 191 & pp. 189-91). The central halls at el-Amarna sometimes had double doors, a feature unknown elsewhere.
 243. Bruyère (1939) pp. 67-69 & p. 261.
 244. Koenigsberger (1936) p. 12..
 245. Koenigsberger (1936) p. 17. See also a similar door (70001b) from Deir el-Bahri (Roeder (1914) pp. 9-11 & Tafel 3).
 246. Bruyère (1939) p. 332.
 247. Petrie (1890) p. 24.
 248. Peet & Woolley (1923) p. 59.
 249. Peet & Woolley (1923) p. 30.
 250. Bruyère (1939) p. 45.
 251. These are the only two sites, with the exception of house 2 at Theadelphia which have produced good descriptions and illustrations of doors. In the report from the other sites, the details of the door construction are omitted and instead one finds remarks such as 'the doorways had lintels of sandstone and limestone sills' referring to house 1 in the Faiyum hamlet (Caton-Thompson & Gardner (1934) p. 146). The first part of this section will therefore inevitably be rather lacking in substance and limited often to single references but this situation should improve when discussing the complete door frames from Karanis and Edfu.
 252. Jouguet (1901) p. 388 but see below for a discussion of this door.
 253. Viereck & Zucker (1926) p. 4.

219. Spencer (1979) pp. 10 & 23.
220. Spencer (1979) p. 123 and see the bonding corpus pl. 17 & 18 for diagrams of the earliest type of arches c_1 & d_1 .
221. There are exceptions to this rule, for example in the second palace of Ramesses III at Medinet Habu, where the roofs were vaulted, whilst the lintels were straight and had a cavetto cornice and torus moulding (Hölscher (1941) p. 39). Another exception was 'Kahun' where the doorways were all arched with semi-circular arches, whilst the rooms were usually flat roofed, although there were a few examples of vaults (Petrie (1891) p. 8). Owing to the comparative rarity of vaults in domestic buildings until the hellenistic period, arched doorways in this context are relatively rare and it seems that the flat lintel was the standard.
222. Petrie (1938) p. 16.
223. Frankfort & Pendlebury (1933) p. 64.
224. The only actual door lintel discovered during the excavations was from the tomb of Mesou and Apii and was found being used as door jambs in two neighbouring houses, N.E. XII & N.E. XIII. Despite its fragmentary state, it is clear from the illustration (Bruyère (1939) fig. 11) that it was not a cavetto cornice. It was of limestone, engraved and painted in several colours originally, before being reddened for its use as a door jamb. It was 1.23 m long, 40 cm tall and 12 cm wide and it seems that when used as the lintel in the tomb the door opening was about 1 m wide (p. 42). Although this was the only lintel actually found, Bruyère states (p. 45) that 'Nous avons également recueilli de nombreux fragments de jambages, et de corniches à gorge égyptienne prouvant que les linteaux des portes de maison étaient comme ceux des fausses portes surmontés d'une corniche'. A fragment of such a lintel was found by the door to the second room in N.E. XIII. Since he also states that the door frames were often those taken from abandoned tombs and since these must have sometimes been flat like that of Mesou and Apii, both types of lintel must have been in use in the houses at Deir el-Medina.
225. Hölscher (1951) p. 30. The palaces at Medinet Habu are both examples of vaulted roofs occurring with straight lintels and in the instance quoted here, the back of the lintel was sloped and had arched projections on it to

support the barrel vaults.

Another example of the lintel being tied in to the wall is found in the Priests' houses at Karnak, where in houses I & II (the only ones which had surviving door frames) the flat lintel was attached to the wall not only by string or rope passing through a hole in the rough end of the lintel, which was then cemented into the wall, but also by two dovetail joints, securing it still further (Anus & Sa'ad (1971) p. 220).

A variation of this method was found at el-Amarna in the house of Hatiay, the architect (T.34.1.), where the lintel of the front door was built into the wall and fastened in a similar manner with wooden pegs being placed through holes made in the ends of the lintel (Frankfort & Pendlebury (1933) p. 65).

- 226. Anus & Sa'ad (1971) p. 228.
- 227. Davies (1928) figs. 1B, 3, 6, 10 & 11.
- 228. Davies (1928) fig. 8.
- 229. Koenigsberger (1936) p. 2.
- 230. Lauffray (1979) fig, 147, p. 189-191 & fig. 191.
- 231. Petrie (1890) p. 24.
- 232. Bruyère (1939) p. 291 & p. 244.
- 233. Frankfort & Pendlebury (1933) p. 27.
- 234. Frankfort & Pendlebury (1933) p. 37.
- 235. Peet & Woolley (1923) p. 30.
- 236. Peet & Woolley (1923) p. 80.
- 237. Bruyère (1939) pp. 313, 316, 325 & 269. It is interesting that in each case the room without a door was the second, or living room, thus making one long open area.
- 238. For example, the doors of the house in the tomb of Neferhotep (TT 49) in Davies (1928) fig. 3, in TT 23 (fig. 7), and that in the house of Nebamun (TT 90) (fig. 10).
- 239. Koenigsberger (1936) p. 14.
- 240. Petrie (1907) p. 18. Type K models showed this feature and

- pl. XVIII, 80 illustrated one of these doors.
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 249. Peet & Woolley (1923) p. 30.
 250. Bruyère (1939) p. 45.
 251. These are the only two sites, with the exception of house 2 at Theadelphia which have produced good descriptions and illustrations of doors. In the report from the other sites, the details of the door construction are omitted and instead one finds remarks such as 'the doorways had lintels of sandstone and limestone sills' referring to house 1 in the Faiyum hamlet (Caton-Thompson & Gardner (1934) p. 146). The first part of this section will therefore inevitably be rather lacking in substance and limited often to single references but this situation should improve when discussing the complete door frames from Karanis and Edfu.
 252. Jouguet (1901) p. 388 but see below for a discussion of this door.
 253. Viereck & Zucker (1926) p. 4.

254. Hölscher (1954) p. 46 & plate V at end.
255. Boak (1935) pl. VIII, fig. 14.
256. Caton-Thompson & Gardner (1934) p. 146.
257. Viereck & Zucker (1926) p. 4.
258. Boak (1935) plate VI, figs 10 & 11 & pp. 11-12.
259. Caton-Thompson & Gardner (1934) p. 148.
260. Viereck & Zucker (1926) p. 4
261. Jouguet (1901) p. 393 fig. 7 & p. 394 fig. 9. See below, p. 238.
262. These details are clear on photos taken of the Coptic houses at Medinet Habu in summer 1982 but unfortunately they are not sufficiently close up to allow details of how the arches were formed to be very apparent. (Plate V). The doorway to house 100 was the only one photographed which seemed to be so recessed and there does not appear to be a similar arrangement shown on the plans of these houses published by Hölscher in volume V. Presumably decoration over the arch as seen in house 85 was fairly common, but Hölscher does not mention it at all (Hölscher (1934) pl. 32).
263. Roeder (1959) p. 149.
264. Gabra (1941) plate VIII.
265. Hölscher (1954) p. 46 & Alliot (1933) p. 4.
266. Hölscher (1954) p. 47.
267. Caton-Thompson & Gardner (1934) pp. 146 & 148.
268. Jouguet (1901) pp. 388-389.
269. Viereck & Zucker (1928) p. 4.
270. The doors referred to here from Dionysias do not really fall within the limits of this study, as they come from the Roman fort built on the site, but the construction is so similar to doors from domestic houses in places like Karanis that it would seem rather foolish to discard such a useful example.
271. Yeivin (1928) p. 174.

272. Husselman (1979) p. 40.
273. Husselman (1979) p. 60, plan 8 and plates 37b & 40b..
Approximate measurements can be deduced for this door from plate 37b, on which is shown a metre rule, and then by using the scale reached there on plan 8. From this it seems that the jambs (from the threshold to the lintel) were 2 m tall and 31.35 cm wide, which gives the width also of the lintel and threshold. The width of the actual opening was exactly 1 m and the total length of the lintel was therefore 1.63 m. Hence:

(all approximate measurements)

	<u>length</u>	<u>depth</u>	<u>width</u>
lintel:	1.63 x	0.37	x 0.28 - 0.31 m (bottom) (top)
jamb:	2	x 0.285	x 0.3135 m
threshold:	1.63 x	0.285	x 0.3135 m

The actual door opening was approximately (maximum measurement) 2 m x 1 m.

274. Boak & Peterson (1931) p. 27 & pl. XXI, fig. 41.
275. Husselman (179) p. 40 & plate 40a.
276. Boak & Peterson (1931) p. 59 & pl. XXXVI, fig. 72 & pl. XXXV, fig. 73.
277. Husselman (1979) p. 40 and Boak & Peterson (1931) p. 59.
278. According to Boak and Peterson (1931) p. 59, this bolt case was an addition to the door and served no function, since there was no channel in the wall for the bolt to run in.
279. See pl. 47a in Husselman (1979).
280. Husselman (1979) pl. 43a.
281. Husselman (1979) pl. 43b.
282. Yeivin (1928) p. 49 & an example of limestone paving in this space is to be found in C38 (Husselman (1979) p. 41).
283. Yeivin (1928) p. 48 & plan 12 & 14 in Husselman (1979). Plan 13 (the entrance of C50A) is an example of the

doorframe set flush with the encasing wall.

284. Yeivin (1928) p. 48.
285. C50A was a courtyard onto which house C51 opened, so the doorway can be counted as an outside one (Husselman (1979) p. 70 and plate 43b). Subsequent plates illustrate a number of examples of lined (or at least partially so) doorways, some of which are doors leading from the street, e.g. plate 46 - door from CS32 to C45J, plate 57b - door between CS23 and C36B (blocked when photographed), while others, e.g. plate 45b (door between C45K & H) and plate 58 (between C51A & B) are internal doorways, thus refuting Yeivin's comment to some measure.
286. Husselman (1979) plate 45b. A further illustration of wood being used to hold the bolts in place and surround the bolt holes is shown on plate 50, which shows the doorway of C47K².
287. Rubensohn (1905) pp. 5-6, and see plan LXX.
288. Nowicka (1969) p. 87. There is also papyrological evidence from Philadelphia that double doors were used for entrances opening onto the courtyard, corridor or street (PCZ 597 64, 1.36-46) in Nowicka (1969) p. 95).
289. This type will be discussed in more detail further on.
290. Schwartz (1969) pp. 32-37.
291. Husselman (179) p. 43.
292. Boak (1935) pl. XI, fig. 20 and plans VI-VII.
293. Others had been found by the earlier excavators, notably Alliot, who made some very useful notes on the Byzantine and Roman doorways he found, but none of the ones he described was as complete as those mentioned here (Alliot (1933) pp. 4 ff).
294. Bruyère et al. (1937) p. 90 & plate XII, 2.
295. Spencer (1979) p. 101 & plates 17 & 18.
296. Bruyère et al. (1937) p. 90.
297. Michalowski et al. (1938) p. 7 and figs. 5 & 6. These door arches also appear to be of Spencer's type c, as again they do not appear thick enough to be two rows deep.

298. Boak (1935) Plan XIII.
299. Boak (1935) Plan XII.
300. Husselman (1979) Plan 31, section E-F.
301. Spencer (1979) p. 139.
302. It seems to have been common practice for doors to have been specifically mentioned in rent or sale agreements in the hellenistic period and they were either sold with property or the person renting it agreed to return the property with the doors intact at the end of the lease (Luckhard (1914) p. 86).
303. Husselman (1979) plate 53 & p. 43.
304. Husselman (1979) plate 52 & p. 43.
305. Koenigsberger (1936) p. 18.
306. Chamonard (1924) p. 261.
307. See below, p. 268.
308. Rubensohn (1905), fig. 4 & p.4.
309. Husselman (1979) plate 55.
310. See above fn. 288.
311. Husselman (1979) plate 55a & p. 55.
312. Husselman (179) p. 43 & plate 55 b.
313. The evidence from these is used on the basis that their plans are similar to those of the actual houses built in Alexandria and that the tombs were constructed to resemble these houses in as close a way as possible, so that wall decorations and other internal fittings can be taken as good reflections of those found in the houses (cf. Noshy (1937) p. 22).
314. Adriani (1936) p. 95.
315. Adriani (1936) p. 92.
316. Adriani (1936) p. 45 & pl. XIV.

317. Adriani (1936) p. 36 & fig. 17.
318. Adriani (1936) p. 38. The cornices had not been preserved, so Adriani restored them with the doric type for simplicity.
319. Breccia (1912) p. XXXIII.
320. Jouguet (1901) p. 393 & fig. 7.
321. Although similar to Egyptian types of door frames, like those from el-Amarna, it is the features mentioned, which make one hesitate about wholeheartedly describing it as Egyptian. As seen above, no Egyptian door of any type ever sloped and it is only epigraphic material which illustrates any degree of slant on a door and then it is usually slight - all the archaeological evidence shows that the doorways were completely rectangular. The moulding round the edges is also a new feature, unparalleled in any example dealt with here, and the lintel beam from Egyptian doors of this type as found at el-Amarna and Deir el-Medina and Medinet Habu, although they were sometimes tied into the brickwork through a rough piece of stone left longer at the sides, were never apparently longer than the total width of the jambs plus opening. Thus, to see this doorway as of Greek origin, maybe defiled a little on its way from Alexandria to the Faiyum, would explain many of these apparent problems.
322. See above pp. 140 - 146.
323. There are parallels for this type of doric door throughout the Greek and classical world - Priene, Delos, Magnesia, Pompeii, in contemporary (hellenistic) buildings in Latium and in tombs at Langaza, Niausta and Palatitia, so its Greek origin is not in question (Adriani (1936) p. 92).
324. Jouguet (1901) p. 394 & fig. 9.
325. Adriani (1936) p. 39 & fig. 17.
326. Adriani (1936) p. 58 & fig. 26.
327. Breccia (1912) p. XXXIII & plates II, X & XI.
328. Adriani (1936) p. 36 & plate C. Adriani describes this on p. 94 as a type less common than others looked at so far and believes it was analogous to the appearance of funerary or sacred shelters and compared its richness with style II from Pompeii, as exemplified on the walls of the villa at Bosco Reale.

- 329. Breccia (1912) p. XLI.
- 330. Adriani (1956) pp. 23-24 & figs. 23 & 24.
- 331. Adriani (1936) p. 49 & pl. XIV.
- 332. Breccia (1912) p. XXXVII & pl. XIII.
- 333. Breccia (1912) pl. XIII.
- 334. Nowicka (1969) fig. 51b & fig. 54.
- 335. Nowicka (1969) fig. 50.
- 336. Breccia (1912) p. XXXIX.
- 337. Breccia (1912) p. XXXIX.
- 338. Graham (1966) p. 14.
- 339. Breccia (1930) p. 102 & 117.
- 340. Chamonard (1924) p. 261.
- 341. Boak (1935) pl. VIII.
- 342. Such lintels from Herculaneum can be seen in Grant (1971) pp. 128 & 173, and from Pompeii, Eschenbach (1978) pls. 45, 114, 169 & 170.

C. Windows

- 343. Randall-MacIver & Mace (1902) p. 42.
- 344. Koenigsberger (1936) pp. 11-12.
- 345. Jequier (1924) p. 125.
- 346. Randall-MacIver & Mace (1902) p. 42.
- 347. Jequier (1924) p. 127.
- 348. Peet & Woolley (1923) p. 42-43.
- 349. Badawy (1951) fig. 3. p. 7.
- 350. These 'windows' seem to have a similiar function to the 'mashrabiya' in houses of Islamic date - namely, to allow a limited amount of air into the room through an elaborately decorated and carved wooden panel. It seems likely that the Arabic screens developed from the ornate windows used in the pharaonic and Coptic periods, as there is clear evidence of their use in the monastery of Epiphanius on the west bank at Thebes. Here, many small pieces of wood were found, which were flat on one side and turned on a lathe on the other, with a tenon at each end to fit into mortices and form a complicated screen, while some slotted together to make the shape of a cross, so the light entered the room in that pattern (Winlock & Crum (1926) p. 56 & pl. XV).
- 351. Tytus (1903) p. 14.
- 352. Petrie (1907) - small windows placed high up - pl. XVII, 69 & pl. XX, 64; windows with horizontal bars - pl. XX, 46; windows with vertical bars - pl. XVIIIIA, 71.
- 353. Frankfort & Pendlebury (1933) pp. 9 & 10.
- 354. Peet & Woolley (1923) p. 18.
- 355. Frankfort & Pendlebury (1933) p. 7.
- 356. Frankfort & Pendlebury (1933) p. 10.
- 357. Smith (1958) p. 331.
- 358. Peet & Woolley (1923) p. 20.
- 359. Frankfort & Pendlebury (1933) p. 15.

360. Davies (1928) fig. 8, p. 244 & fig. 10, p. 246. None of the house representations in this article has a window of such relative width at the one reconstructed in house N.49.10 and neither do the Karnak talatat indicate special openings in rooms which could have been loggias. Perhaps it is more likely that there was a series of small windows, each of about 1 m in width, continuing along the length of the wall, which would still have left the door placed symmetrically between two windows.
361. Frankfort & Pendlebury (1933) p. 28.
362. Davies (1928) fig. 1A.
363. Windows could thus only be placed along the long axis of the houses (or east and west sides) at both sides, since the houses joined each other this way, and windows at the north and south sides would generally have obliterated by the next door's raised clerestory, but see below, pp. 315-316.
364. The window came from C.VI (Bruyère (1939) pp. 70 & 308).
365. Bruyère (1939) p. 70.
366. Bruyère (1939) pp. 54 & 72.
367. Peet & Woolley (1923) p. 57.
368. Anus (1971) p. 70 & fig. 1.
369. Peet & Woolley (1923) p. 59.
370. Peet & Woolley (1923) p. 57.
371. Davies (1928) fig. 7 p. 243.
372. Davies (1928) fig. 3 p. 239 & fig. 6 p. 242.
373. Davies (1928) fig. 7 p. 243.
374. Davies (1928) fig. 8 p. 244 & fig. 10 p. 246.
375. Nelson & Hölscher (1929) p. 40.
376. Hölscher (1910) p. 41.
377. Roeder (1959) p. 149.
378. Roeder (1959) p. 149.

379. Nelson & Hölscher (1931) p. 53.
380. The few surviving windows in the Coptic houses at Djeme are found in houses on the Great Girdle Wall and they are formed in the brickwork. Two small windows in the ground floor of building 76 were placed high up in the wall and were formed in the brickwork. They must have lit the stair well or some room which was between floors since they were above the top of the vault. One other remaining window is to be seen in house 106 and that, too, was formed in the brickwork, but was vaulted. A similar method of construction to the door in 100 was used, a recessing of the actual window, but in this case there must have been some reason other than decoration for the arrangement.
381. Nelson & Hölscher (1931) p. 53.
382. Hölscher (1954) p. 47.
383. Gabra (1941) pls. XX, XXV, XXX.
384. Gabra (1941) p. 55. The windows in temple 1 were in fact false, just placed against the wall, but in the other ones they served their real function of limiting the amount of light allowed in.

It is a pity that none of the houses Gabra cleared had windows remaining, as it would have been interesting to see whether the houses of this date in a town like Hermopolis ever had these latticed windows or were simple openings. It is rather strange that there was clear evidence of latticed openings at Djeme but that in houses of the same date and similar type at Hermopolis, nothing like that was mentioned in the report.
385. Gabra (1932) pp. 62-63.
386. For example in the atrium of the Samnite House as a frieze about three-quarters of the way up the wall. (Kraus (1975) pl. 170 p. 143). Gabra also mentions similar false windows in the villa Fannius Sinistor, at Boscoreale near Pompeii (Gabra (1932) p. 60).
387. Winlock & Crum (1926) p. 56.
388. Winlock & Crum (1926) p. 57.
389. Petrie (1889) p. 28.
390. Yeivin (1928) pls. CVI & CVII.

391. Husselman (1979) p. 47.
392. Yeivin (1928) p. 169.
393. Husselman (1979) p. 45 & plan 31.
394. Husselman (1979) pl. 13b.
395. Husselman (1979) pl. 12a.
396. Husselman (1979) pl. 64a.
397. Yeivin (1928) p. 170.
398. Husselman (1979) p. 44.
399. Yeivin (1928) p. 171.
400. Yeivin (1928) p. 171.
401. Husselman (1979) p. 46 & pl. 65b & Yeivin's single example in his type C.
402. Yeivin (1928) p. 172.
403. Yeivin (1928) p. 171. This arrangement has no parallels in pharaonic Egypt, but can be seen in Roman buildings from elsewhere in the Empire, as in basements in imperial buildings in Germany (Filtzinger et al. (1976) p. 134).
404. ^{Husselman} (1979) p. 46 & plan 7.
405. Husselman (1979) pl. 68.
406. Husselman (1979) for example, pls. 12, 13a, 60b, 61a, 63b, 67b.
407. Yeivin (1928) p. 170.
408. Husselman (1979) p. 45 & pl. 65a.
409. Boak (1935) p. 12.
410. Husselman (1979) p. 44 & pl. 60b.
411. Jouguet (1901) p. 392, fig. 6.
412. Jouguet (1901) p. 393, fig. 7. However, it is worth pointing out that a window of similar shape, if not rather more on a slant than the one at Medinet Ghoran, was copied

by Champollion from a wall painting in the temple of Tuthmosis III at Medinet Habu (Perrot & Chipiez (1883) p. 168). This differed from the one under discussion by being solid with four small vertical slit openings. It is important in that it proves on occasion the Egyptians would construct a window which was not rectangular, although the infrequency of evidence for this type proves it was not a common feature in their buildings.

413. Jouguet (1901) p. 394.
414. Chamonard (1924) p. 289 & fig. 161. However, it seems that the window in the house at Delos was filled in by a stone grillwork all made out of the same monolithic block, presumably very similar to the small rectangular windows found in temple 1 at Tuna el-Gebel. The shape of the Delian window is not discussed, but if it was called 'doric' one presumes it shared some feature with the 'doric' door and had a gentle slant.
415. Rubensohn (1905) p. 4 & fig. 4.
416. See above p. 234.
417. Nowicka (1969) p. 100.
418. Erman (1885) p. 241. For a discussion of whether this type owed its origin to Crete, see Davies (1928) p. 252.
419. Yeivin (1928) p. 172.
Davies (1928) p. 250, fig. 14.
420. Davies (1928) figs. 2, 8, 10. Also see Badawy (1948) p. 132 type F.
421. Bruyère (1939) p. 70.
422. Davies (1928) figs 3, 6. Badawy (1948) p. 132, types A & B.
423. Nelson & Hölscher (1929) p. 40.
424. Yeivin (1928) pl. CVII.
425. Yeivin (1928) pl. CVI.
426. Gabra (1932) pp. 60 ff.
427. Winlock & Crum (1926) p. 56.

- 428. Badawy (1951) fig 3.p. 7.
- 429. Koenigsberger (1936) p. 12.
- 430. Tytus (1903) p. 14.
- 431. Nelson & Hölscher (1931) p. 53.
- 432. Winlock & Crum (1926) p. 56.
- 433. Nowicka (1969) p. 101.

D. Ceilings and Roofs

- 434. Badawy (1951) p. 10.
- 435. Spencer (1979) p. 10.
- 436. Badawy (1951) p. 12 & fig. 61.
- 437. Spencer (1979) p. 130.
- 438. Peet & Woolley (1923) p. 73.
- 439. Peet & Woolley (1923) p. 58.
- 440. Frankfort & Pendlebury (1933) p. 52.
- 441. This type of vault, constructed of stretchers placed on edge forms Spencer's type d1, which was very common at all periods (Spencer (1979) p. 139). It was also used in the vaulted stores at the Ramesseum which were made of four courses of bricks. The vaults in the stores in the north-west corner of the Ramesseum measured 3.70 m wide by 4.50 m high (Spencer (1979) p. 86).
- 442. Fathy (1969) pp. 16-18 & plates 7-18.
- 443. See the section on walls for a discussion of bricks used for vaults and their relative sizes - fn. 58.
- 444. Petrie (1907) pp. 15-18.
- 445. Petrie (1907) pl. XX, 160.
- 446. Petrie (1907) pl. XX, 64.
- 447. Michalowski et al. (1938) p. 122 & pl. XLII, 1. The dimensions of the model are as follows: 10 cm tall; 16 cm long; 17 cm wide.
- 448. Petrie (1891) p. 8.
- 449. Petrie (1891) p. 8.
- 450. Nelson & Hölscher (1929) p. 40 & Hölscher (1941) p. 38 & pl. 26.
- 451. Hölscher (1941) p. 39, pl. 26.
- 452. Hölscher (1951) p. 16.

453. According to fig. 15 in Hölscher (1951) there was a difference of 2 m between the ground levels of the pomoerium side of the houses and that of the narrow alley which separated the two rows of houses. If his assumption is correct then the basement level had an entrance separate from the upper floors and since the remaining level was probably used for storage then room M could well have been covered with a vault and not left open as Hölscher thought might be possible (Hölscher (1951) p. 15).
454. Hölscher (1951) p. 16
455. Petrie (1907) p. 16 & pl. XV, 106 & 5.
456. Petrie (1907) p. 17 & pl. XV, 31, 148.
457. Petrie (1907) p. 17 & pl. XVIA 19, 98 & XVII 150, 74.
458. Petrie (1907) p. 17 & pl. XVII, 35.
459. Petrie (1907) pl. XX, 26.
460. Petrie (1907) p. 17. The mulqafs first appear in Petrie's type D and it is perhaps no coincidence that this was the first time Petrie believed arched roofs were intended to be represented. However, in subsequent types, mulqafs were used with flat roofs, although they are shown as rounded raised hoods.
461. Winlock (1955) pp. 17-19, pls 9 & 11 & pl. 13 (Cattle inspection).
462. Petrie (1891) p. 6 & see plan 3 attached.
463. Petrie (1891) p. 6.
464. Petrie (1891) p. 6.
465. Petrie (1891) p. 8.
466. Petrie (1890) pp. 23-24.
467. Tytus (1903) p. 13.
468. Tytus (1903) p. 13.
469. Tytus (1903) p. 13. Presumably, though, these were plastered and painted in designs or at least colours that would not detract from the ceiling designs; perhaps in the colour of the ceiling background. Tytus mentions that this

was normally white, but he also noticed one blue and some yellow backgrounds (Tytus (1903) p. 24).

- 470. Smith (1958) p. 295.
- 471. Smith (1958) p. 295.
- 472. Smith (1958) pp. 293 & 295.
- 473. Peet & Woolley (1923) p. 42.
- 474. See plan XIV.
- 475. See plan XIII.
- 476. As none remained this has been reconstructed from the plaster evidence.
- 477. Frankfort & Pendlebury (1933) p. 28.
- 478. Frankfort & Pendlebury (1933) p. 34.
- 479. Frankfort & Pendlebury (1933) p. 41. The thickness of the plaster on the main beam was 2.5 cm, while on the smaller rafters it was 1.5 cm. Also from measuring the plaster, they obtained dimensions of at least 20 cm deep and 10 cm wide for the main beam.
- 480. Peet & Woolley (1923) p. 58. The house was 1 East Street, which was larger than the others in the village and was thought to have belonged to the overseer of the village. It is a pity that they were not more specific about the shape of the notches, how many beams could be supported and whether the notches were the only means of attachment, or whether some kind of pegging had been used to fix the beams to the column.
- 481. In house V.37.6 (Frankfort & Pendlebury (1933) p. 9), plaster was discovered showing marks of the rafters and palm ribs, so it is clear that no intervening layer of mats was used in this house at least. If the roof was not likely to be walked over, as was the case with the central hall, then presumably it did not have to be so sturdy and this form of covering could have sufficed. The roof remains from the workmen's village indicate that there they usually had the layer of mats or bundles of reeds or straw between the shorter poles and plastering, but these roofs were an integral part of the house and therefore needed to be capable of carrying greater weights (Peet & Woolley (1923) p. 37).

482. Frankfort & Pendlebury (1933) p. 24.
483. Frankfort & Pendlebury (1933) p. 33.
484. Frankfort & Pendlebury (1933) p. 28.
485. Frankfort & Pendlebury (1933) p. 29.
486. Peet & Woolley (1923) p. 41.
487. See below, pp. 293 - 294.
488. As mentioned in the section on windows, painted plaster from such a dummy window was found in V.37.1, but it was not mentioned from which room it came and it was thought that in this case these imitation windows were interspersed among real ones, but it is perfectly possible that a row of such windows could have lined the blocked side of the clerestory.
489. Davies (1928) fig. 1A & B.
490. See section on windows for discussion of both examples.
491. Lauffray (1979) fig. 147. He says on p. 190, that lighting in the central hall was 'par un lanterneau porté par les quatre colonnes', and that it was not represented here. No mention is made of clerestory lighting at all, but it seems that, in the central and right hand portrayals, it would have been possible as the difference in height was there. Some kind of artificial lighting must have been available for evenings and then such a lantern would have been invaluable. In these two houses the difference in height between the two sets of columns is 45 cm approximately (taken from fig. 147), while in the left hand illustration there is no difference in height at all. It is tempting to pass this off as a mistake, but the details recorded in these talatat agree to such a great extent with this evidence from the archaeological record, that to do this would be casting aside some interesting material.
492. Peet & Woolley (1923) p. 9.
493. Erman (1885) p. 241.
494. Frankfort & Pendlebury (1933) p. 33.
495. Bruyère (1939) p. 28.
496. Peet & Woolley (1923) pl. XVI.

497. Bruyère (1939) p. 50, fig. 15.
498. Painted plaster was found above the roof debris of the front room in house 9 Gate Street at the Amarna workmen's village, presumably from a portico of some kind (Peet & Woolley (1923) p. 80).
499. Anus & Sa'ad (1971).
500. Anus & Sa'ad (1971) pp. 231-232.
501. Hölscher (1951) p. 15, fig. 15.
502. Newberry (1893a) p. 3, plate II for tombs 2 & 3, pl. XXII.
503. Peet & Woolley (1923) pp. 56-57.
504. Peet & Woolley (1923) p. 57.
505. Peet & Woolley (1923) p. 58.
506. Bruyère (1939) p. 190, N.O.XV.
507. C.VII, Bruyère (1939) p. 311.
508. From calculations of stair height in the front room, it was reckoned this room stood at 2.30 m (Peet & Woolley (1923) p. 56).
509. For example, in houses 11 Long Wall Street & 21 West Sreet (Peet & Woolley (1923) pp. 83 & 90).
510. Very few of these bases were found, even from the houses excavated; 6 complete examples and fragments of 2 further ones, which does suggest that they were removed, or else were much scarcer than otherwise thought. The best one came from 19 West Street which was the only one still in situ and was 53 cm in diameter and 13 cm tall. The column had been placed in mortar, which was then painted red like the column and it seemed that this column was about 25 cm in diameter (Peet & Woolley (1923) p. 89).
511. As Hölscher mentions in connection with his houses at Medinet Habu (Hölscher (1951) p. 15).
512. See appendix III.
513. See above, p. 212.
514. In house 9 Main Street they found a lot of plaster and part

of a pilaster in the debris in the bedroom and some in the front room and concluded there had been a shelter over the main section. It is surprising that the debris could scatter itself so far and yet leave no trace among the rubbish in the central rooms. It is difficult to be certain but it looks from the plan as if the stairs were in the more southerly of the two back rooms and it is possible that the shelter on the roof was constructed on the part of the roof to which the stairs led, which would explain the presence of the pilaster and painted plaster in the back part of the house. That from the front is more difficult to explain (Peet & Woolley (1923) p. 80). The kitchen of the next house, 10 Main Street, produced more plaster and again they believed it came from the roof of the central room, but the same points apply as with house 9 (p. 81).

515. See above, fn. 481.
516. Peet & Woolley (1923) p. 58.
517. Peet & Woolley (1923) pp. 58 & 60.
518. There are some exceptions to this, where the entrance is not a direct line with the corridor in the main room as in the houses in East Street and in some in Long Wall Street, where the entrance was in the centre of the wall rather than to either side. This does not, however, affect the proposed position of the divans, although it is worth noting that in the houses in East Street, Gate Street and some in Main Street (5, 10 and 12), which all had northern divans, the foot of the stairs to the front roof was over part of the divan, a system which presumably meant that one or two actual steps did not need to be constructed.
519. For a detailed examination of this, see Appendix III.
520. Anus & Sa'ad (1971) fig. 17.
521. Peet & Woolley (1923) p. 57.
522. Bruyère (1939) p. 308.
523. Bruyère (1939) p. 70. A brief glance through some earlier reports (Bruyère (1933) & (1934)) on the village failed to discover any indication of these 'windows', so there is only this remark to counterbalance the marked deficit of evidence in the 1939 report.
524. The only exception to this is house S.E.I, which was of an unusual plan anyway and had its staircase positioned so

that it started in the central room and ran up the side of the front section.

- 525. Bruyère (1939) p. 66.
- 526. Peet & Woolley (1923) p. 89.
- 527. Bruyère (1939) p. 70.
- 528. Bruyère (1939) p. 273.
- 529. Anus (1971) p. 70.
- 530. Davies (1928) fig. 1.
- 531. Davies (1928) fig. 6.
- 532. The house of Nebamun (Davies (1928) fig. 10) and the house shown on the papyrus of Nakhte (Davies (1928) fig. 11).
- 533. In their survey of Egyptian rural life carried out in the 1920s, Lozach & Hug (1930) make some interesting comments on the two kinds of roof. Even when they were working, the vaulted roof was becoming much rarer but still survived from Aswan to Esna, which was geologically an area of Nubian sandstone, and further north up to Minya, where it was very rare although any material could be used to construct a vault. The advantages, as seen by the fellahin, were that a vault allowed more air in the room because it was higher and by needing no wood in its construction the risk of fire was decreased. The disadvantage was the greater weight involved, which was compensated for by building thicker outside and very straight walls (pp. 95 ff.).

Flat roofs were constructed from beams covered by very close layers of palm leaves, mats to prevent the wood from rotting and finally a layer of earth or rubble topped by lime ashes and twigs.

It is very interesting to note that in the plans of some types of houses in this book, particularly the 'maison pauvre' of Middle Egypt there are half roofed courts shown, while the plans do not differ very much at all from those investigated at el-Amarna and Deir el-Medina workmen's villages (fig. 2 & 3, p. 124). In the 'maison pauvre' of the south of Egypt, this arrangement is found again, but here the entrance hall is half roofed. Apparently this house came from Iqlyt at Aswan and belonged to an extremely poor peasant (fig. 7, p. 132).

534. Roeder (1959) p. 148.
535. Roeder (1959) p. 149.
536. Houses 1, 2, 3, 11, 12, 14, & 24 all definitely had vaulted ceilings to the rooms in each storey, houses 4 & 5 had flat roofs but the basement of 5 was vaulted and 8 unusually had a dome (Gabra (1941) pp. 67 ff.).
537. Nelson & Hölscher (1931) pp. 51 & 53.
538. Hölscher (1954) p. 46 & 47.
539. For example Guéraud (1929) p. in connection with house H" and Bruyère et al. (1937) p. 89 talking about 'la maison centrale'. Also Alliot (1939) p. 11.
540. Alliot (1935) p.
541. See above p. 266.
542. Guéraud (1929) p.
543. Alliot (1933) p. 8.
544. Alliot (1933) p. 10.
545. Bruyère et al. (1937) p. 89 & Michalowski et al. (1938) p. 8.
546. Guéraud (1929) p. 15.
547. Spencer (1979) pl. 19.
548. Bruyère et al. (1937) p. 89 & Michalowski et al. (1938) p. 8.
549. Michalowski et al. (1938) p. 10.
550. Bruyère et al. (1937) p. 62.
551. For instance the walls in 'la maison centrale' were 1.35 m wide on the north and south sides and 1.60 m in the east and west, which clearly indicates a substantial building (Bruyère et al. (1937) pp. 87-8).
552. Honroth et al. (1909) p. 18.
553. Personal observation on the site and pl. XL1b in Kaiser et al. (1970) & p. 122.

554. Kaiser et al. (1980) p. 270.
555. Kaiser et al. (1970) p. 128.
556. For instance the roofs of C47J and BC72H & K and collapsed but were still reasonably intact (Husselman (1979) pl. 26a & 27a).
557. Yeivin (1928) p. 58.
558. Yeivin (1928) p. 58.
559. Yeivin (1928) p. 58.↑
560. Yeivin (1928) p. 60. [These bundles had another use - stretched across a canal they were used to trap fish.]
561. Yeivin (1928) p. 52.
562. Spencer (1979) pls. 18 & 19 & Husselman (1979) plans 2 & 3.
563. Husselman (1979) p. 37.
564. Yeivin (1928)p. 54.
565. Husselman (1979) p.37 & plan 5.
566. Husselman (1979) plan 6.
567. Yeivin (1928) p. 57.
568. Yeivin (1928) p. 26.
569. Zucker (1910)
570. Jouguet (1901) p. 389.
571. Adriani (1936) fig. 43.

E. Floors

- 572. Peet & Wooley (1923) pp. 71-72 & 81.
- 573. Peet & Woolley (1923) p. 72.
- 574. Peet & Woolley (1923) p. 79.
- 575. Peet & Woolley (1923) p. 73.
- 576. Peet & Woolley (1923) p. 79.
- 577. Peet & Woolley (1923) pp. 70 ff.
- 578. Peet & Woolley (1923) p. 38.
- 579. Peet & Woolley (1923) pp. 6 & 38.
- 580. Peet & Woolley (1923) p. 25.
- 581. Bruyère (1939) pp. 55 & 65.
- 582. Hölscher (1954) p. 7.
- 583. Hölscher (1954) p. 4.
- 584. Gabra (1941) p. 68.
- 585. Hölscher (1954) p. 37. The houses were in B3 and B5.
- 586. Hölscher (1954) p. 38.
- 587. Hölscher (1954) p. 50:
- 588. Bisson de la Roque (1929) p. 19.
- 589. Bisson de la Roque (1929) pp. 20 & 24.
- 590. Bisson de la Roque (1930) p. 23.
- 591. Bisson de la Roque (1929) p. 21. This was not necessarily of Byzantine date.
- 592. Bisson de la Roque (1937) p. 39.
- 593. Michalowski et al. (1938) p. 7.
- 594. Guéraud (1929) p.
- 595. Alliot (1933) p. 9.

- 596. Kaiser et al. (1970) p. 123.
- 597. Kaiser et al. (1970) p. 133.
- 598. Kaiser et al. (1970) p. 132.
- 599. Kaiser et. al. (1972) p. 175.
- 600. Kaiser et al. (1971) p. 190.
- 601. Kaiser et al. (1972) p. 177.
- 602. Yeivin (1928) p. 52.
- 603. Yeivin (1928) p. 52.
- 604. Boak & Peterson (1931) p. 15.
- 605. Viereck & Zucker (1926) p. 4.
- 606. Caton-Thompson & Gardner (1934) p. 147.
- 607. Caton-Thompson & Gardner (1934) p. 148.

F. Stairs

608. Petrie (⁹1907) p. 19.
609. Petrie (1907) p. 19. For example, houses illustrated on plates XVIA, 122 & XVII, 128.
610. Petrie (1890) p. 23.
611. Peet & Woolley (1923) p. 56.
612. Peet & Woolley (1923) p. 58.
613. Peet & Woolley (1923) p. 56.
614. Peet & Woolley (1923) p. 58.
615. Peet & Woolley (1923) pp. 78 & 81.
616. Peet & Woolley (⁽¹⁹²³⁾pp. 80 & 90.
617. Peet & Woolley (1923) p. 71.
618. Peet & Woolley (1923) p. 22.
619. Peet & Woolley (1923) p. 16.
620. Peet & Woolley (1923) p. 23.
621. Peet & Woolley (1923) p. 5.
622. Peet & Woolley (1923) p. 9.
623. Bruyère (1939) p. 29.
624. Bruyère (1939) pp. 29, 252 & 253.
625. Bruyère (1939) p. 251, 257 & 262.
626. Bruyère (1939) p. 265.
627. See above pp. 303 ff.
628. Hölscher (1954) p. 7.
629. Roeder (1959) p.
630. Hölscher (1954) p. 47.
631. This can be seen clearly in the plans of the Coptic houses

in Hölscher (1954), for example of houses 78, 45, 41 and 92.

- 632. Hölscher (1954) p. 47.
- 633. Michalowski et al. (1938) p. 7.
- 634. Michalowski et al. (1938) p. 7 & Bruyère et al. (1937) p. 89. The height of the stairs in 'la maison centrale' is based on that of the bricks used.
- 635. Bruyère et al. (1937) p. 89.
- 636. Michalowski et al. (1938) p. 7.
- 637. Bruyère et al. (1937) p. 89.
- 638. Bruyère et al. (1937) p. 22.
- 639. Alliot (1933) p. 10.
- 640. Honroth et al. (1909) p. 19.
- 641. Honroth et al. (1909) p. 19.
- 642. Kaiser et al. (1970) p. 133.
- 643. Kaiser et al. (1970) p. 131.
- 644. Yeivin (1928) pp. 144-145.
- 645. Husselman (1979) p. 38.
- 646. See above p. 32b and Yeivin (1928) pp. 145-146.
- 647. Yeivin (1928) p. 145.
- 648. Yeivin (1928) p. 147.
- 649. Yeivin (1928) p. 145.
- 650. Yeivin (1928) p. 144.
- 651. Husselman (1979) p. 39.
- 652. Husselman (1979) p. 39.
- 653. Husselman (1979) p. 38 & plate 37b.
- 654. Boak & Peterson (1931) p. 14.

- 655. Rubensohn (1905) p. 4.
- 656. Rubensohn (1905) p. 5.
- 657. Rubensohn (1905) p. 4.
- 658. Grenfell, Hunt & Hogarth (1900) p. 39.
- 659. Viereck, Zucker (1928) pp. 2-3.
- 660. Caton-Thompson & Gardner (1934) p. 146.
- 661. Schwartz & Wild (1950) p. 18.

FOOTNOTES TO CHAPTER V

1. For example, see the reconstruction of the appearance of the central hall in the house of vizir Nakht (K.50.1) at el-Amarna in Peet & Woolley (1923) pl.IV, where the doors and windows add considerably to the decoration of the room which without them would seem rather dull.
2. For example, round the niche in the central hall of O.48.17 (Peet & Woolley (1923) p. 28) and similarly in V.37.6 (Frankfort & Pendlebury (1933) p. 9).
3. Petrie (1891) p. 7 The two separate wall paintings appear to show the inside of houses, one of which was vaulted, whilst the other indicated a flatter arched roof supported by columns, which seem quite similar to some of the tombs at Beni Hasan, like that in tomb 18 (Newberry (1893b) pl. XX).
4. Bruyère (1939) pp. 57-8 & 60.
5. Peet & Woolley (1923) p. 59.
6. Peet & Woolley (1923) pp. 75-6. This kind of decoration seems to have been the standard one in the houses at Deir el-Medina, where traces of painting were found in several houses adorning the front of the bed or altar (lit clos) in the front room. The designs were drawn in white against a grey background and usually showed Bes, either winged (N.E. X & S.O. VI) or dancing and making music (N.E. X, N.E. XIII, S.O. VI) but one preserved the feet of a nude dancing girl paying the lute (S.E. VIII). Other panels were completely undecorated and other walls had simple panels with a border of white bands (Bruyère (1939) pp. 57, 58, 60, 254-9, 273 & 329).
7. Peet & Woolley (1923) p. 83.
8. Peet & Woolley (1923) p. 84.
9. No mention is made of the top edge of this border but presumably it once existed and was like the bottom edge with three lines.
10. Peet & Woolley (1923) p. 59. As it was the standard means of decoration at Deir el-Medina, it is not surprising that the same form of ornamentation was discovered at el-Amarna,

and it seems likely that a white design on a grey plaster ground was the standard while the coloured painted illustrations mentioned by Peet & Woolley were exceptional.

11. Peet & Woolley (1923) p. 88.
12. Peet & Woolley (1923) p. 88.
13. See below, p. 361.
14. Peet & Woolley (1923) p. 43. It is conceivable that this space was filled with colourful wall hangings, ~~for which comes~~ ^{evidence} from the palaces at Medinet Habu and el-Malqata. ~~_____~~ (Uphill (1972) p. 725 & Tytus (1903) p. 17).
15. Frankfort & Pendlebury (1933) p. 23.
16. See above, pp. 290.
17. See above, pp. 251-252.
18. See above, pp. 215-216.
19. Peet & Woolley (1923) p. 28.
20. Peet & Woolley (1923) pp. 43 & 44.
21. Frankfort & Pendlebury (1933) p. 8.
22. Frankfort & Pendlebury (1933) p. 12.
23. Frankfort & Pendlebury (1933) p. 29.
24. Peet & Woolley (1923) p. 26. They also mention that many columns were painted red-brown (p. 44.)
25. Frankfort & Pendlebury (1933) p. 15 no. 24/656; p. 21, no. 26/386.
26. Peet & Woolley (1923) p. 27, no. 22/516.
27. Frankfort & Pendlebury (1933) p. 15, no. 26/646.
28. Smith (1958) p. 59, fig. 43.
29. Smith (1958) p. 330.
30. For example, the walls of the northern loggia in the house of Nakht, seem to have had the same decorative scheme as

that in the central hall, with white walls surmounted by a floral frieze (Peet & Woolley (1923) p. 5).

31. Frankfort & Pendlebury (1933) p. 8.
32. Tytus (1903) pp. 22 & 17. The use of woven wall hangings also used to screen off parts of the room, is known from I dynasty ^{tombs} at Saqqara where Emery found remains of several, all brightly coloured (Emery (1958) pls. 6-8).
33. Tytus (1903) pp. 16 & 20.
34. Tytus (1903) p. 23.
35. Tytus (1903) p. 23.
36. Tytus (1903) p. 22.
37. See above, pp. 352 & fn. 6.
38. Smith (1958) p. 295; p. 289, fig. 3., 285 & 284 & p. 293.
39. There is not enough evidence about internal decoration in hellenistic houses outside the Faiyum to make a separate section on them worthwhile, as mentions are very infrequent. The only site where such details are recorded is Elephantine - the houses built in the temple court - where Grossmann mentions that the walls were plastered and sometimes decorated with paintings (Kaiser et al. (1975) p. 70). There is material from the tombs at Tuna el-Gebel, which will be considered later.
The wall niches found in most hellenistic houses will be the subject of a separate section.
40. Husselman (1979) p. 35.
41. Husselman (1979) p. 35.
42. Husselman (1979) p. 35. This seems to be a continuation of the 'Ritztechnik' mentioned by Schütz, whereby the divisions between the parts of the wall were indicated only by scratchlines (Schütz (1936) p. 54).
43. Yeivin (1928) pp. 14-15.
44. Husselman (1979) p. 36.
45. See above, p. 354.
46. For example Husselman (1979) pl. 18 & 19a.

47. Boak & Peterson (1931) p. 47.
48. Boak & Peterson (1931) p. 47.
49. Yeivin (1928) p. 164.
50. Boak & Peterson (1931) p. 48.
51. Husselman (1979) p. 36.
52. Yeivin (1928) pl. XCIV, photos 744 & 5-2315.
53. Boak & Peterson (1931) p. 48.
54. Boak & Peterson (1931) p. 34.
55. Rubensohn (1905) p. 6.
56. Rubensohn (1905) p. 7.
57. Rubensohn (1905) p. 13 & 14.
58. Husselman (1979) p. 9.
59. Rubensohn (1905) p. 14 & see above, p. 146.
60. Rubensohn (1905) p. 7.
61. Rubensohn (1905) p. 7.
62. Yeivin (1928) p. 164a & plate XCV, photo 813.
63. Viereck & Zucker (1926) p. 5.
64. Vanderborght (1942) p. 120.

65. See for example pl. 47b, 57a, 58 in Husselman (1979).
66. Yeivin (1928) p. 61a.
67. Rostovtzeff (1919) passim but particularly p. 150.
68. Pagenstecher (1919) p. 179 & Adriani (1952) p. 108. The fact behind this theory was proved by discoveries in Alexandria between 1936-37 in the royal palace quarter, of actual faience tiles in various colours (Adriani (1952) p. 110).

69. The only other example of imitating the brick courses of a wall which Rubensohn knew of when he wrote his article, was in the Philippeion at Olympia which was described by Pausanias during his travels in the mid 2nd century AD (Rubensohn (1905) p. 13).
70. Rostovtzeff (1919) p. 150. The literature on the development of the hellenistic styles is sizeable, but among articles relevant to its presence in Egypt, the chapter by Chamonard concerned with the decoration at Delos provides an excellent understanding of the elements of the styles and then the dissertation by Schütz is useful for Egypt specifically (Chamonard (1924)) ch. VII & Schütz (1936)).
71. Chamonard (1924) pp. 364-65.
72. However, the material concerning the house of Diotimos at Philadelphia seems to show that many, if not all of the features of the 'Hellenistic structural style' were present in the wall decoration painted by Theophilus, so it is likely that other houses at Philadelphia had similar wallpaintings now lost owing to bad preservation (Vanderborght (1942) pp. 120-21).
73. Kraus (1975) pp. 205-8.
74. Rubensohn (1905) p. 7.
75. Gabra (1941) p. 68.
76. Gabra (1941) p. 73.
77. Gabra (1941) p. 77 & pl. XXXVIII.
78. Gabra (1941) p. 78.
79. Gabra (1941) pl. XXXVII.
80. The outline given here is based on that of Pagenstecher (1919), Rostovtzeff (1919), Schütz (1936) & Adriani (1936 & 1952). Although the argument put forward by Noshy (1937) is interesting, it relies rather too much on architectural details and does not seem to consider the artistic side enough, which, as mentioned, must be investigated equally with the architecture when trying to date the tombs.
81. Rostovtzeff (1919).
82. Adriani (1936) p. 127.

83. Pagenstecher (1919) ch. IV; Schütz(1936) pp. 52-3; Adriani (1936) p. 127.
84. Rostovtzeff (1919) p. 147.
85. Rostovtzeff (1919) p. 148 & Schütz (1936) p. 53.
86. Rostovtzeff (1919) p. 150.
87. Pagenstecher (1919) ch. IV & Schütz (1936) pp. 52-3.
88. Schütz (1936) p. 51.
89. Adriani (1936) p. 119.
90. Breccia (1912) p. xxxiii.
91. The use of blue on the walls is thought to indicate a feeling of looking into the distance, which became a feature of the second style, and the pilasters are also believed to be indicative of this same style, which made use of more imitated architectural elements. The lack of isodomic layers, which are one of the main features of the first style, means that Sidi Gaber is usually counted among examples of the zonal style (Pagenstecher (191) pp. 168-174).
92. Pagenstecher (1919) p. 173.
93. Adriani (1936) p. 118.
94. Adriani (1936) p. 115.
95. Gabra (1941) p. XXXV.
96. Pagenstecher (1919) p. 170.
97. Adriani (1936) p. 118.
98. Adriani (1936) p. 113.
99. Schütz (1936) p. 54.
100. Adriani (1936) p. 113.
101. Adriani (1936) p. 114.
102. Pagenstecher (1919) p. 174.
103. Schütz (1936) p. 53.

104. Pagenstecher (1919) p. 174.
105. Pagenstecher (191) p. 174.
106. Rostovtzeff (1919) p. 148.
107. Pagenstecher (1919) p. 178.
108. Adriani (1952) pp. 68 & 108.
109. Adriani (1952) p. 58.
110. Pagenstecher (191) p. 140.
111. Gabra (1941) pls. X-XVII.
112. Pagenstecher (1919) p. 178 & Vanderborght (1942) p. 122.
113. The ceilings of rich Greek homes in Alexandria seem to have been very varied in their decoration, to judge from the variety seen in the Alexandrian tombs. The roofs of the tombs are all vaulted, often very slightly, but some more sharply. Some were decorated with geometrical patterns, like lozenges, either on their own, as in Anfushy, hypogeum 2 on the stairs, or within rectangular frames, as in Anfushy, hypogeum 1, room 1. There were also hexagons and octagons, as in Anfushy, hypogeum 3 'souterrain 3', which were here combined with squares. The other feature, apart from the faience tiles for which Anfushy is famous, is the apparent imitation of carpets used to cover the ceiling, and especially that in hypogeum 2, which seems to have been placed over an open trellis-work frame so that the scenes from Greek mythology sewn into the carpet appeared through the spaces in the trellis (Adriani (152) pp. 111, 82, 73 & 111-115). See also Pagenstecher (1919) pp. 181-2 & Nowicka (1969) pp. 69-73 .

Several mosaic pavements have been discovered in Alexandria, among which perhaps the most notable was that found by Breccia at Shatby, which was quite sizeable, measuring 3.35 x 4.60 m, with a central panel showing three putti hunting deer and an outside frame of fourteen semi-mythical and real animals. Breccia dated it between 50 BC and AD 50 and believed it formed part of the pavement of a peristyle, with the rest of the floor covered by white tiles (Breccia (1923)). Other mosaics are described by Adriani (1940) pp. 43-44 and Brown (1957) pp. 67-81.

114. Peet & Woolley (1923) p. 42.

115. Bruyère (1939) p. 68.
116. Bruyère (1939) p. 65.
117. Roeder (1959) p. 149.
118. Hölscher (1954) p. 46.
119. Hölscher (1954) pp. 49-50.
120. Hölscher (1954) p. 50.
121. Hölscher (1954) p. 46 & pl. 43C.
122. Schwartz and Wild found some examples of these water jug stands at Dionysias, but believed that they were to be placed early in the line of development, since there was no exit for the water and it had to be baled out (Schwartz & Wild (1950) p. 53).
123. Honroth et al. (1909) p. 22.
124. Kaiser et al. (1970) p. 100.
125. Boak & Peterson (1931) p. 52.
126. Boak & Peterson (1931) p. 52.
127. Yeivin (1928) p. 158.
128. Boak & Peterson (1931) p. 52.
129. Husselman (1979).
130. Boak & Peterson (1931) p. 60.
131. Boak & Peterson (1931) p. 29.
132. Boak & Peterson (1931) p. 31 & fig. 46, pl. XXIII for B43F.
133. Boak & Peterson (1931) p. 29.
134. Boak & Peterson (1931) pp. 16 & 18.
135. Husselman (1979) pl. 60a.
136. Boak & Peterson (1931) p. 30.
137. Boak & Peterson (1931) p. 52.

138. Husselman (1979) pl. 38.
139. An exception to this generalization (Yeivin (1928) p. 160) seems to be C71, which had a standard shrine niche in room F and another smaller one in room C built on the floor against the south wall (Husselman (1979) p. 47).
140. Boak & Peterson (1931) pp. 30-31.
141. Husselman (1979) pl. 71b.
142. Boak & Peterson (1931) pp. 30-31.
143. Husselman (1979) pp. 47-48.
144. Boak & Peterson (1931) p. 32.
145. Husselman (1979) p. 47 & Pl. 73a.
146. As, for example, in B47F and B14D (Boak & Peterson (1931) p. 31). Yeivin mentions pegs in the wall by the sides of ordinary cupborad niches (Yeivin (1928) p. 157).
147. Boak & Peterson (1931) p. 33 & fig. 47, pl. XXIV.
148. Husselman (1979) p. 36 & pl. 24b.
149. Husselman (1979) p. 36 & pl. 25.
150. Boak (1935) pp. 9-10.
151. Boak (1935) p. 9.
152. Rubensohn (1905) p. 6.
153. Rubensohn (1905) p. 6.
154. Rubensohn (1905) figs. 8 & 10.
155. Rubensohn (1905) p. 6.
156. Rubensohn (1905) p. 8.
157. Rubensohn (1905) p. 8 & fig. 12.
158. Rubensohn (1905) p. 10.
159. Rubensohn (1905) p. 10 & fig. 13.
160. Rubensohn (1905) p. 10 & fig. 14.

FOOTNOTES TO CONCLUSION

1. Randall-MacIver & Mace (1902) p. 42.
2. Emery (1958) e.g. pls. 2, 13, 16, 17, 40, 50, 52, 55 & 59.
3. Davies (1928) fig. 1.
4. See above, p. 24.
5. Smith (1972) p. 710.
6. Newberry (1893) *frontispiece*.
7. Caminos (1954) p. 412.
8. Janssen & Pestman (1968) *passim*.
9. Breasted (1906) pp. 268-9.
10. Hölscher (1941) pl. 10.
11. Engelbach (1931) fig. 1 & Nowicka (1969) fig. 64.
12. Smith (1972) pp. 705-707.
13. See above, p. 115.
14. See above, p. 377.
15. Černý (1973).
16. Černý (1973) p. 354.
17. Luckhard (1914). He wrote his work before the University of Michigan's excavations at Karanis and Soknopaiou Nesos, which now provide the greatest wealth of information for Faiyum hellenistic houses.

APPENDIX I

This appendix traces the development of an area of Edfu over a period of several centuries to see how the buildings gradually evolved and whether they altered in type at all. The area was that labelled as 5 in Alliot's plan of the 1932 excavations and it had been investigated by all the expeditions from that led by Henne in 1923 onwards, producing four plans of the whole area and culminating in that of house H".¹ Dating is problematical and can only be very speculative.

House H" and its predecessors are to be found on each of the five plans, which Guéraud believed to be Byzantine in date but with earlier basements; it is clear, though, that most of the building had older origins.

In the plan of the first level, the key feature is the sizeable wall of which two sides were planned.² (Plan I.) It is likely that this was connected with the complex discovered by Henne in his first season which was definitely some kind of public and possibly religious building,³ as although it is difficult to interpret this there are different enclosures with their own separate entrances and it could be that there was some kind of a hall in the southern part where a sizeable column base was found. North of this across a fairly wide street (about 2 m) there were

remains which could have been more domestic in nature although again they are quite difficult to interpret. It is clear that there was a considerable amount of restructuring and adding on the basic shell and, as they were recovered, they appear to have been basement levels, consisting of various small storage areas.

In the second phase the use of the area seems to have changed rather.⁴ (Plan II.) It is clear that the part enclosed by the wide wall must have lost its original function, since its layout was no longer preserved.⁵ Now there was a more regular pattern being established, with a sizeable building at the east end of the section, apparently with a primarily storage function, from the series of small rooms on the south side. Its plan, consisting of this series of stores branching off a corridor, (which incidentally had its entrance blocked at some time) is rather reminiscent of house 76 at Djeme, which also seemed to be a store building with the various rooms entered from a corridor.⁶ Any constructions between height lines 97.13 and 97.10 are vague since they were taken over by the first layer of Byzantine structures, but it is clear that they were making use of the two earlier buildings north of the original street for outside walls and some internal dividing walls. North of 97.10, more remained and here it might be possible to trace the first signs of the future building H" in the thin north-south wall 'a' and the thicker east-west cross-wall 'b', which bears some resemblance in

turn to the northernmost wall of the previous Roman construction.

The third plan represents the first Byzantine level and it is possible to date this rather more closely, because Alliot, in his first report, says that the Byzantine levels began with the Edicts ordering the closure of the temple of Horus; therefore presumably these buildings must be of 4th century date.⁷ (Plan III.) In this layer the form of the area really takes shape and it is easy to pick out the future houses I, H', and G, while north of 97.10 H" also continues to form. Yet again there is no indication of any street along 97.10 and the original one was by then completely buried. It appears that the forerunner of H" was a rather larger construction than it ended up as, since the west wall formed the outside wall not only of the building north of 97.10 but also continued southwards as the west wall of I. Of house H" the form of the staircase at the east end is already present and exactly the same as in the later house, but here it probably was not a basement level but rather a first floor.

In the fourth plan, which must date between about the 6th-8th centuries AD and so would be contemporary with the area further west, the final plan has become yet more evident. (Plan IV.) The 'Place des Tombes', between I and I' has appeared, which indicates that the early Byzantine buildings U, V, must have become very ruinous and been covered. The basis of the bath

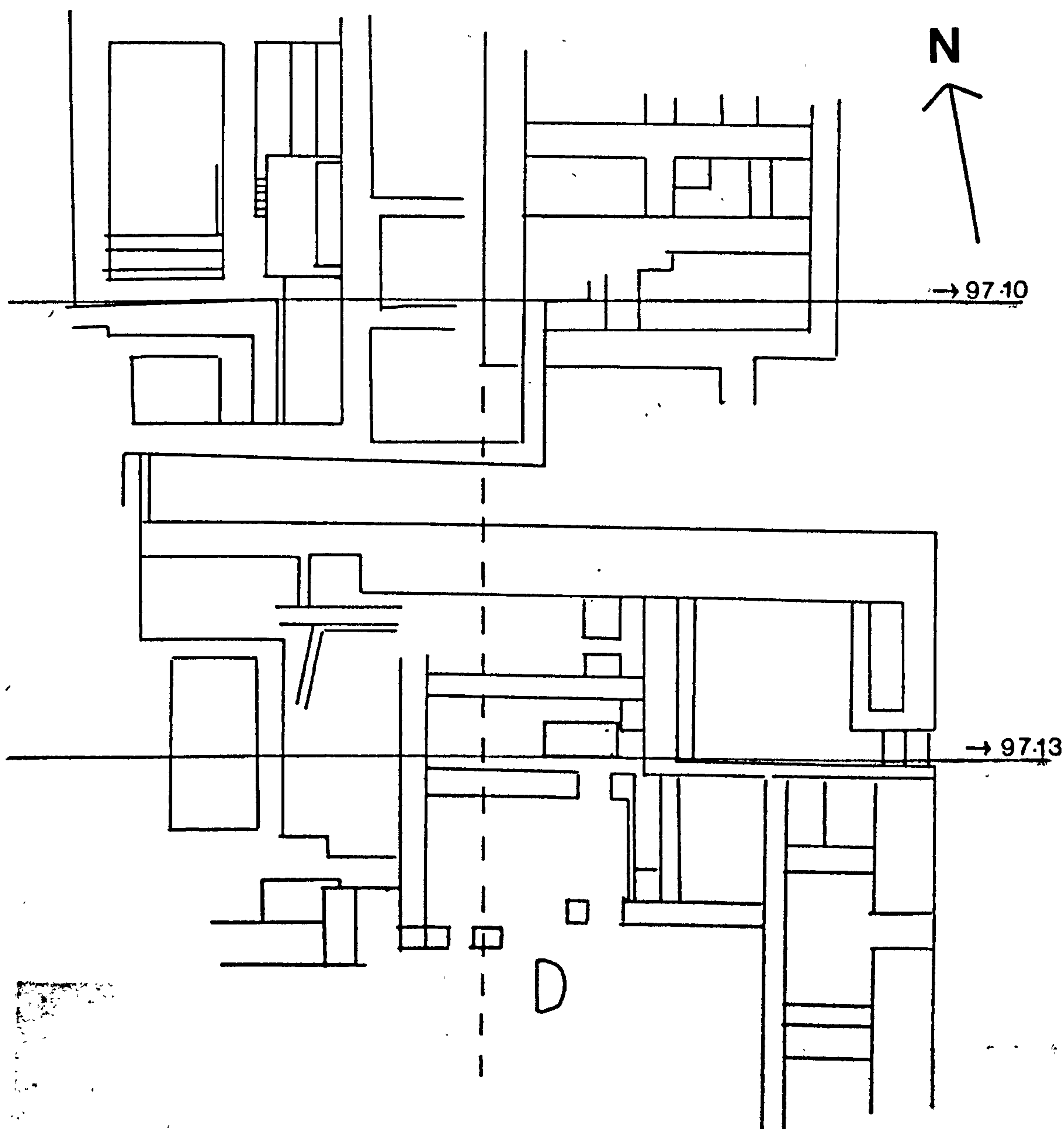
I' is also present, using for its south wall, one from the Roman period which has kept its position very closely throughout the succeeding level. H' and H" still shared the wall along 97.10, showing that at this time there was no sign of the narrow 'ruelle des tombes'.

As to H" in the final stage, the origins of the staircase and the recess for water jars (6) are obvious and the east end could have been constructed around the basement levels which appeared in the first Byzantine level.⁸ (plan V.) It is a pity that the area under the northern part of this building was dug away in the interval between 1928 and 1932, because it would have been interesting to see its predecessors. The results of this indicate that there was really very little change in the overall layout of the area from the end of the late Roman period onwards and that much of the northern area owed its character to the earlier Roman layer. The buildings themselves are characteristic of those found in other parts of Edfu, although fewer conclusions could be drawn from them. than for example from 'la maison centrale', because of their fragmentary state. This is to be regretted because it would also be interesting to have had the opportunity to see how the function of the area changed, if at all, over these centuries.

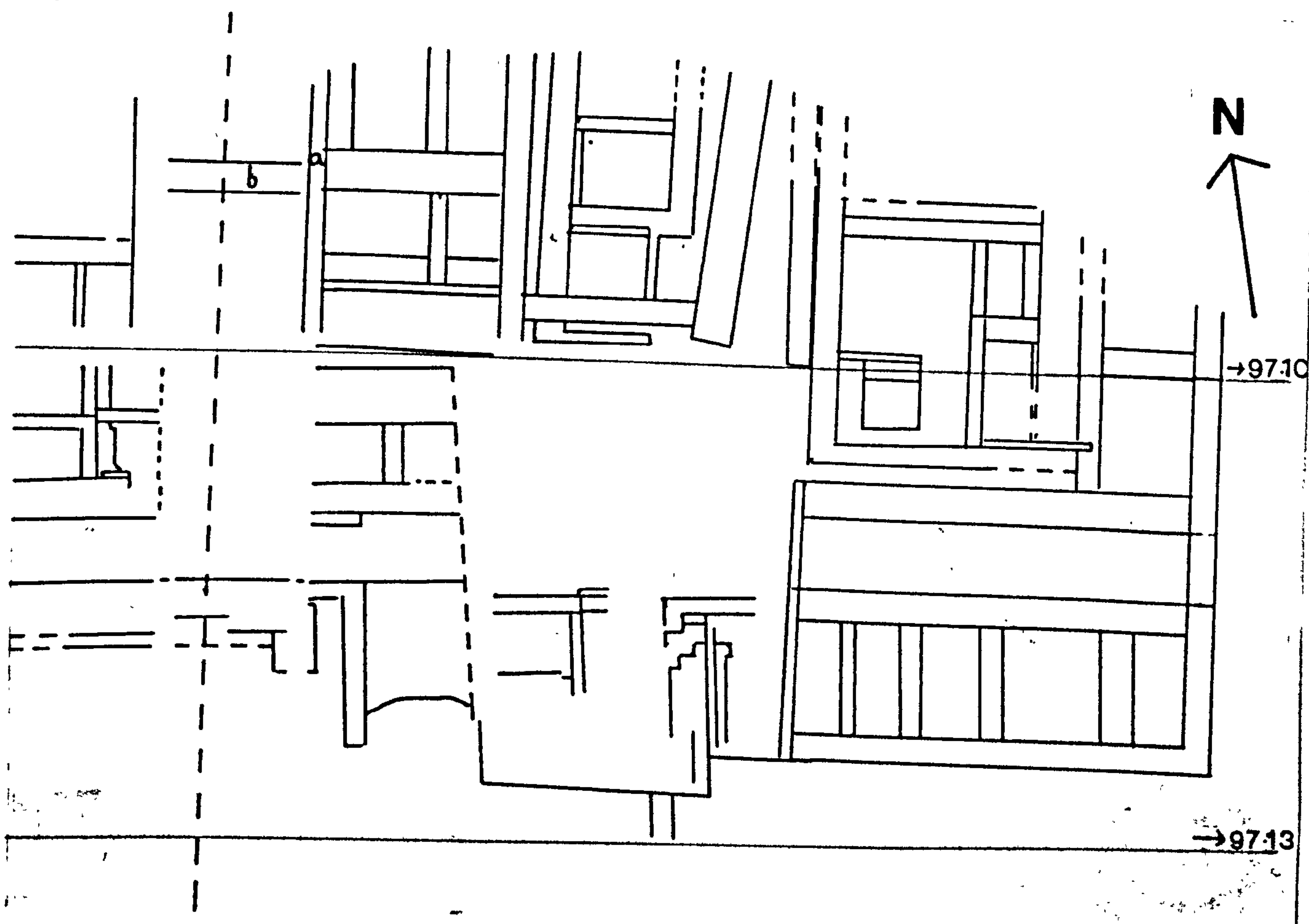
FOOTNOTES TO APPENDIX I

1. The plan connected with this area are:-
Henne (1925) pl. XXXII; Guéraud (1929) p. XXI; Alliot (1933) pls. XXXVIII & Alliot (1935) pl. XXI.
2. Taken from Alliot (1935) pl. XXI. This is labelled as a plan of the Roman levels and is earlier than that of 1933 which formed the late Roman level just below the first Byzantine layer. The date of this first plan could represent activity of approximately 1st to 2nd century AD date. The dotted lines shown on all the plans attached here are to provide a reference point. The plans are all at 1:200 or 0.5 cm = 1 m scale.

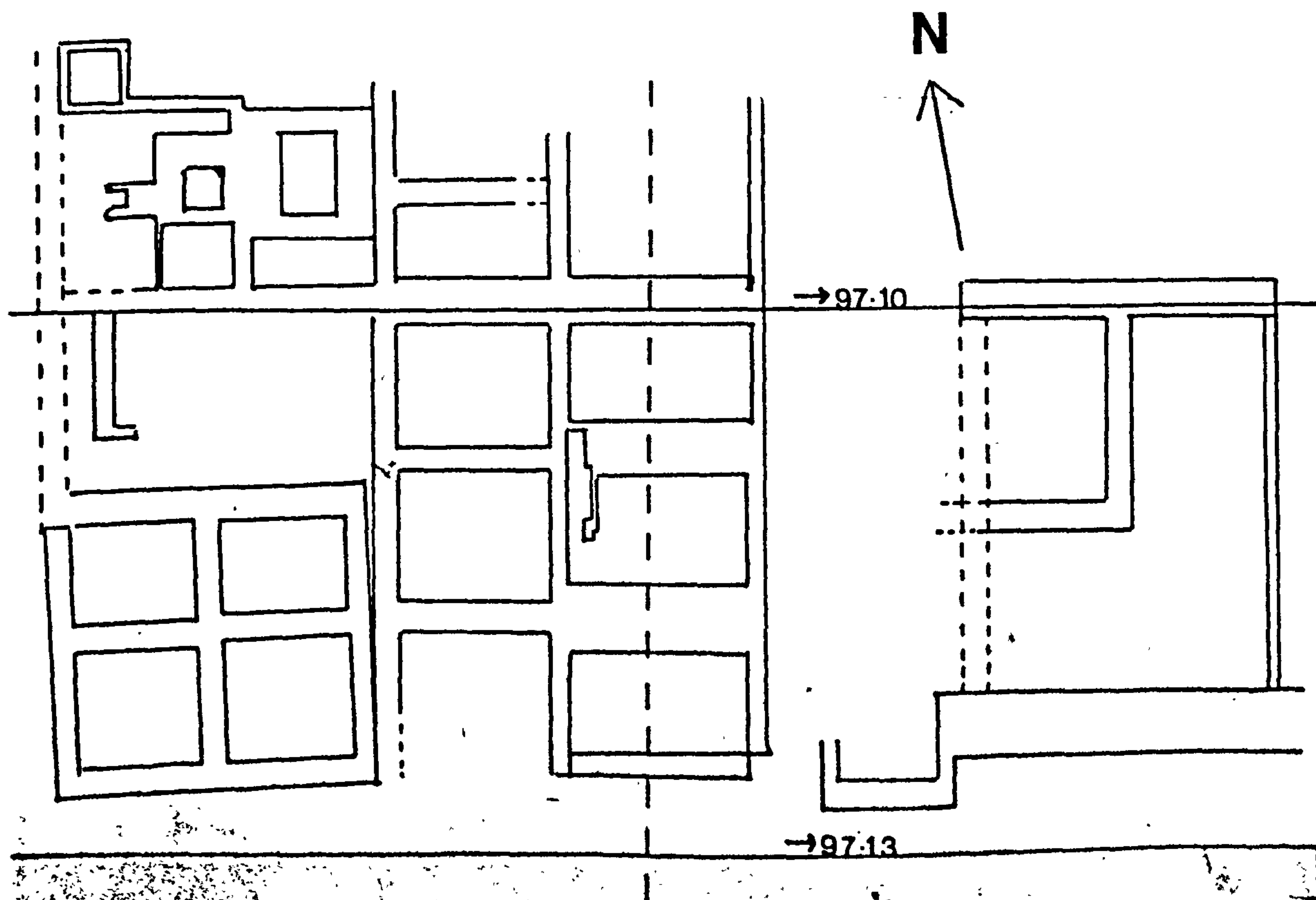
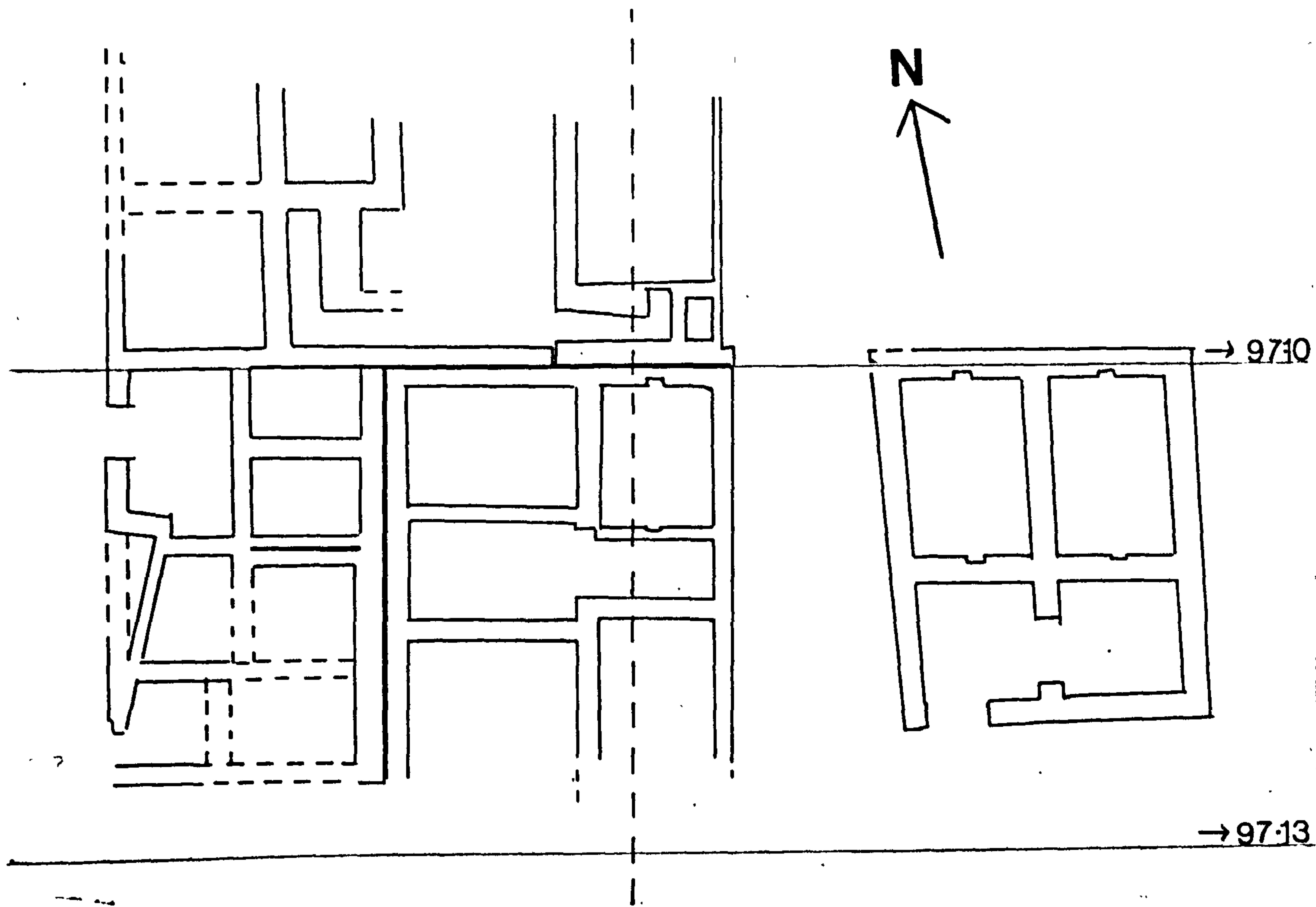
These results are very tentative, since it is difficult to find total agreement between the plans and certain assumptions were made which were not necessarily correct when joining up the five separate levels.
3. Henne (1924) pp. 21-24.
4. Alliot (1933) pl. XXXVIII.
5. This cannot be fully proved as Alliot's excavations did not extend into zone 3.
6. Hölscher (1934) pl. 32.
7. Alliot (1933) p. 4. Both plans III & IV are taken from Alliot (1933) p. XXXVIII.
8. Guéraud (1929) pl. IX.

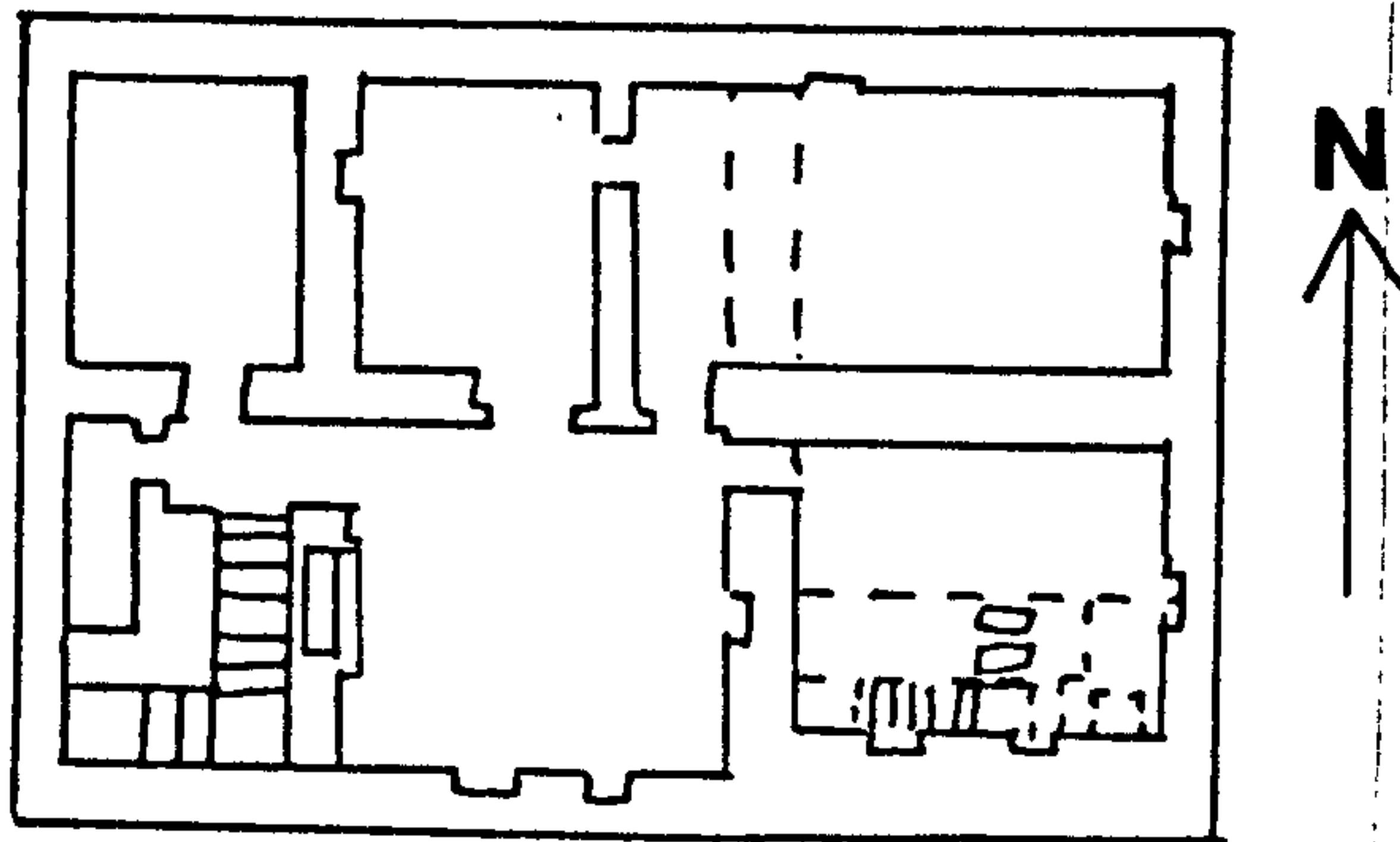


Plan I. Plan of the area in early Roman times.



Plan II. Plan of the area in later Roman times.





Plan V. House H'' in the final level of the area.

APPENDIX II

The graphs reproduced here show the relationships between the three measurements on the bricks, plotted in pairs thus:

1. length : width
2. length : thickness
3. width : thickness

Points corresponding to the different groups of sites are plotted with six separate symbols to make it possible to pick out the various shapes (expressed as ratios) found in six groups. On each graph a line had been drawn corresponding to the shape of a present day English brick and it is interesting to note how well ~~the~~^e these lines correspond with the shape of the Egyptian bricks.

The points on the first graph (length : width) lie closer to a single line than those in the graphs involving thickness, showing that the shape of the largest face of a brick varied very little between periods and locations. This graph, also, does not show any consistent differences of shape between the groups of sites, with the points corresponding to any one group being scattered more or less randomly over the graph.

On the other two graphs (length : thickness and width : thickness) not only is there more scatter, indicating greater

variation in shape when the third dimension, thickness, is considered, but also the points corresponding to different groups show some reasonably clear variety of shape between groups. For example, in the graph of length : thickness, the points relating to Faiyum bricks, indicated by X, tend to be below the others, indicating a thicker brick, whilst those from the first non-Faiyum groups, marked X and from the pharaonic sites, shown O lie above the rest, indicating a thinner shape. Similar differences can also be seen on the graph of width : thickness.

APPENDIX III

The plates produced in this ^Pappendix are intended to show where sunlight, entering through the open part of the roof, strikes on the floor of the house at four time of the year - midsummer, the spring and autumn equinox and midwinter. For each time of year the relative positions of sun and shade have been shown at nine points, one-and-a-half hours apart, throughout the day. The sunny and shaded areas have been calculated by the formula $h \cot \theta$ for the length of shadow where :

h = height of the wall in the house¹

θ = altitude of the sun (see table I).

Thus for midday at Deir el-Medina in midsummer

$$h = 2.50 \text{ m}; \theta = 87^\circ 45'; h \cot \theta = \underline{0.078 \text{ m}}$$

The plans are all drawn to a scale of 1:150, which converts to 1 m : 0.66cm. The latitude has been taken from the Nautical Almanac for places in modern Egypt, el-Minya and el-Luqsor, which are the closest major places to the ancient Egyptian sites of the workmen's villages at el-Amarna and Deir el-Medina.

The single diagrams of the houses placed before the plates are to show the position of the roof defining the open court. The houses taken as representatives for the two sites are N.O. XVI at Deir el-Medina and Long Wall Street 10 at el-Amarna. The position of the long edge of the court roof has been taken as

0.50 m from the column as is shown in fig. 17 illustrating the half roof in the priests' houses at Karnak.² The diagrams have been drawn assuming that the doors from the courtyard into the front and back section of the houses were open, or as at many houses in Deir el-Medina, were not present at all.³ If they were closed, then a lot of sunlight could not have penetrated through to these parts of the house.

FOOTNOTES TO APPENDIX III

1. The height of the house walls has been taken as 2.50 m for Deir el-Medina (Bruyère (1939) p. 290) and 2.30 m for el-Amarna (Peet & Woolley (1923) p. 56).
2. Anus & Sa'ad (1971) fig. 17. Peet & Woolley's plan of house 10 Long Wall Street does not show a central pillar, but as mentioned in the section of chapter IV on roofs, it is quite possible it was removed. If it were central, then at certain times of the day at midwinter and the equinoxes, the pillar would have cast a shadow as shown for these times of year at Deir el-Medina.
3. Bruyère (1939) pp. 241 ff, *passim*.

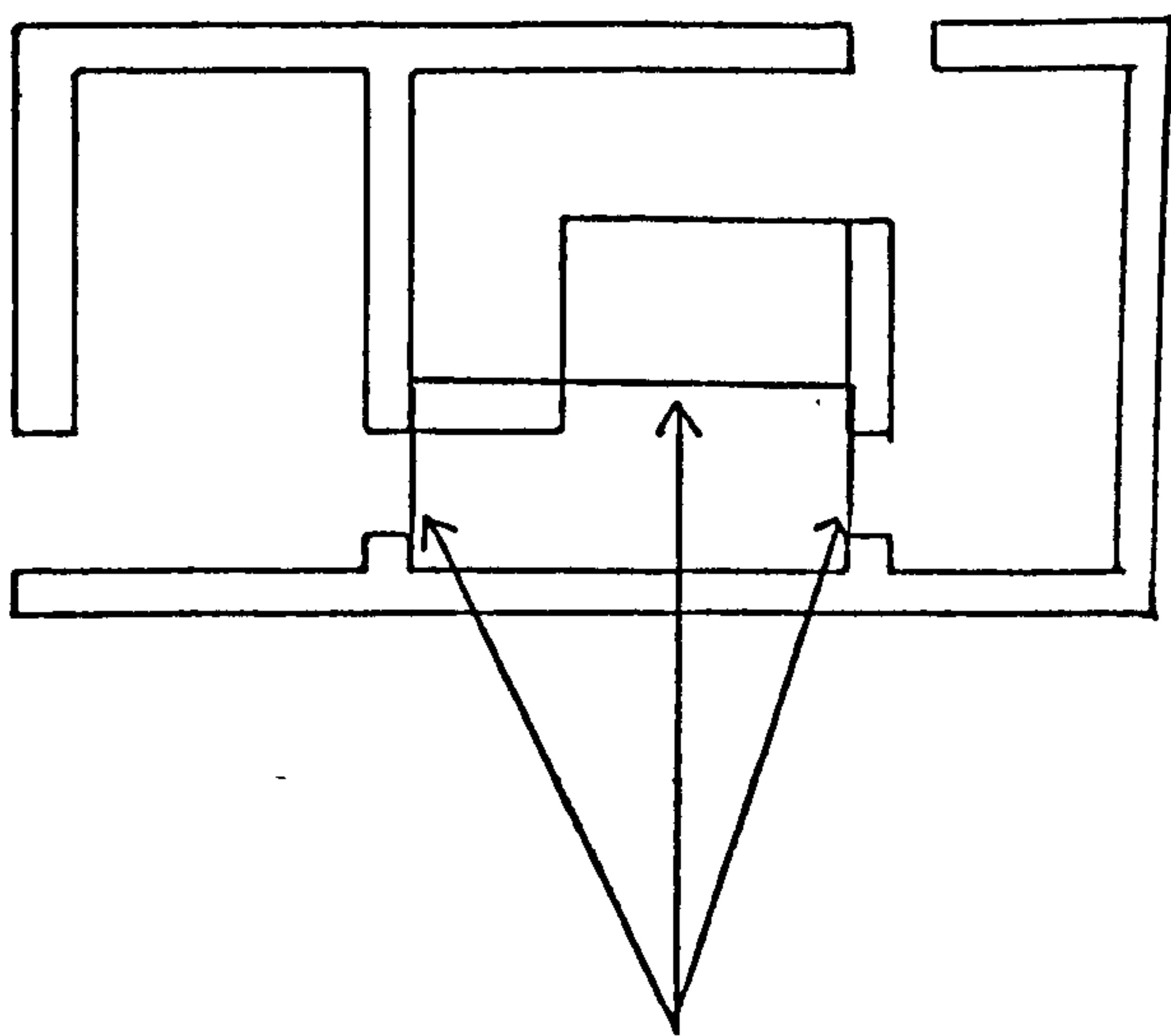
TABLE I

		<u>El-Luqsor</u>			<u>El-Minya</u>		
		Latitude 25° 41'N			Latitude 28° 07'N		
	Sun's Declination	Local Hour Angle	Altitude	Azimuth	Altitude	Azimuth	
		°	° ' °	°	° ' °	°	
Midsummer	23°26.5N	0	87 45	180	85 19	180	
		22½	69 26	91.3	69 16	97.5	
		45	49 12	83.2	49 26	86.2	
		67½	29 16	76.3	29 48	77.7	
		90	9 55	68.5	10 48	69.0	
Spring or Autumn Equinox	Zero	0	64 19	180	61 53	180	
		22½	56 21	136.3	54 37	138.6	
		45	39 35	113.4	38 36	115.2	
		67½	20 11	100.2	19 50	101.0	
		90	setting		setting		
Midwinter	23°26.5S	0	40 53	180	38 27	180	
		22½	36 16	154.2	34 07	154.9	
		45	24 20	134.6	22 02	135.6	
		67½	8 17	121.1	7 02	121.3	
		90	set		set		

Local Hour Angle 0 is local noon by the sun (differs from noon of mean time by up to 15 minutes).

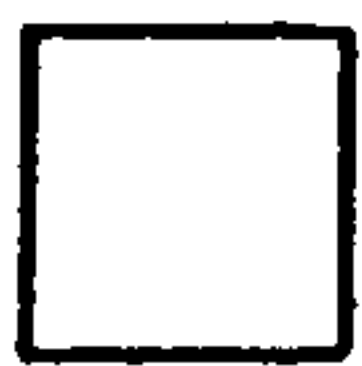
22½°	is	1½	hours	before	or	after	local	noon	
45°	is	3	"	"	"	"	"	"	
67½°	is	4½	"	"	"	"	"	"	to within a
90°	is	6	"	"	"	"	"	"	minute or two

Azimuth is bearing measured from North, towards East or West.

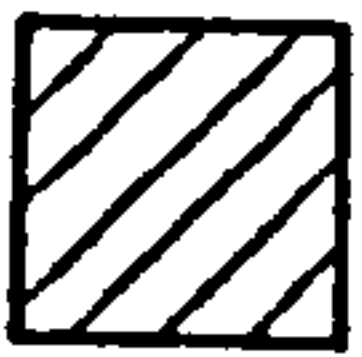


edge of roof

key

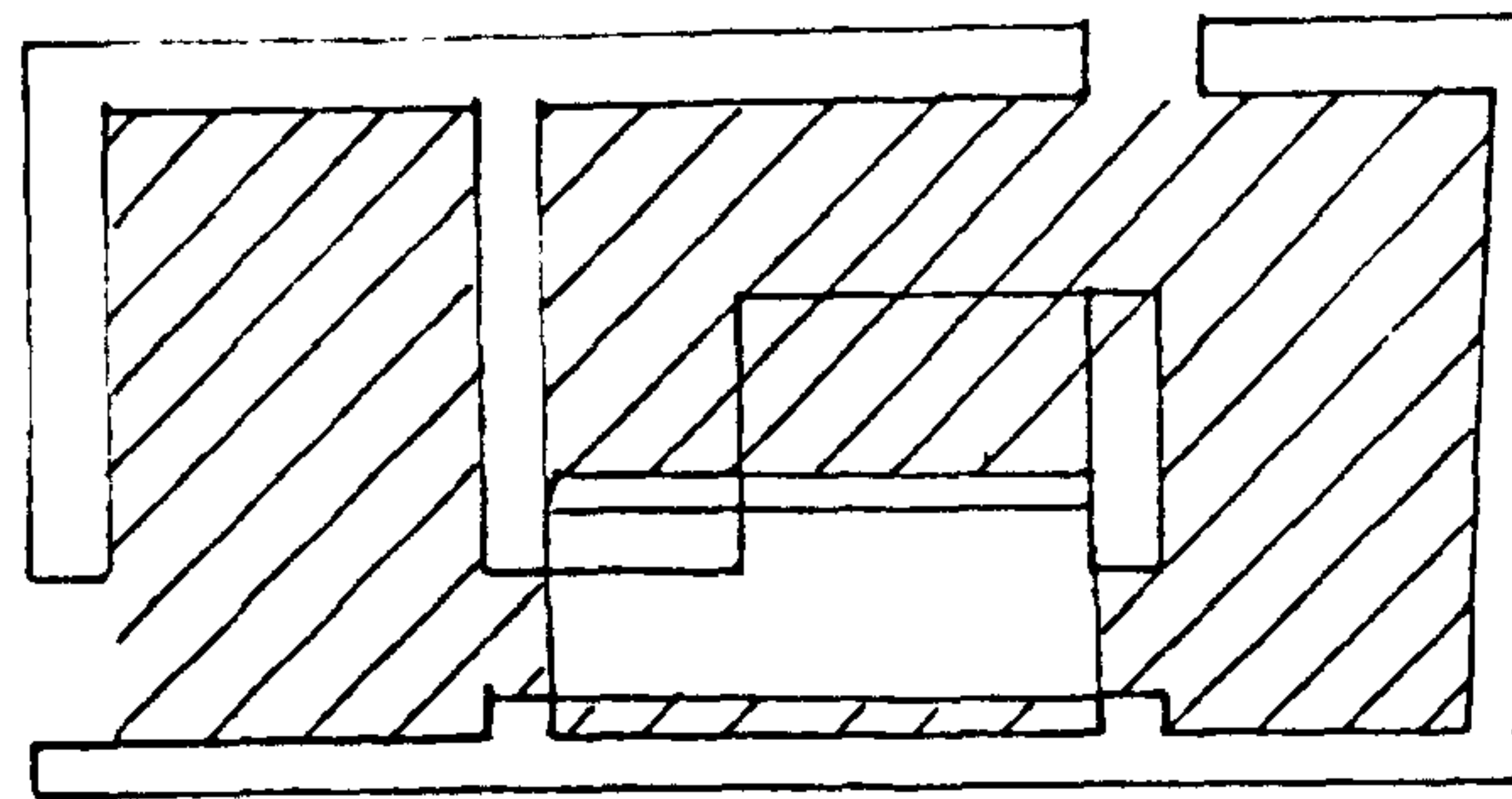


sun on floor

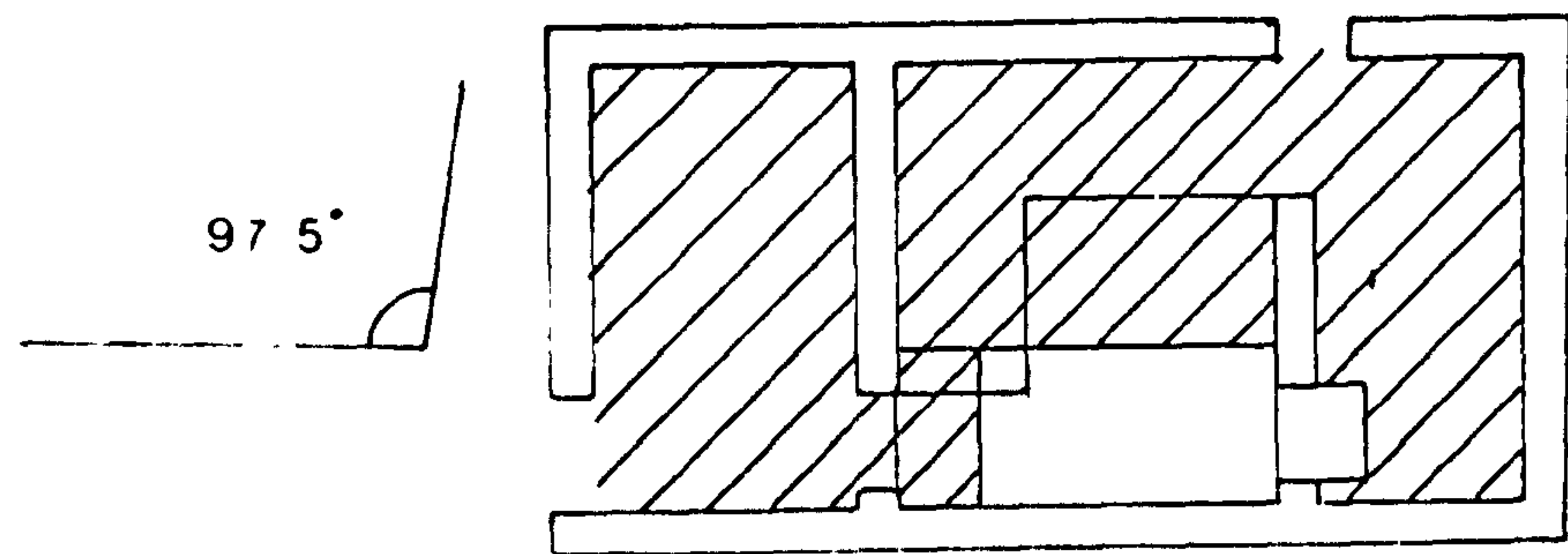


shadow

in following plates



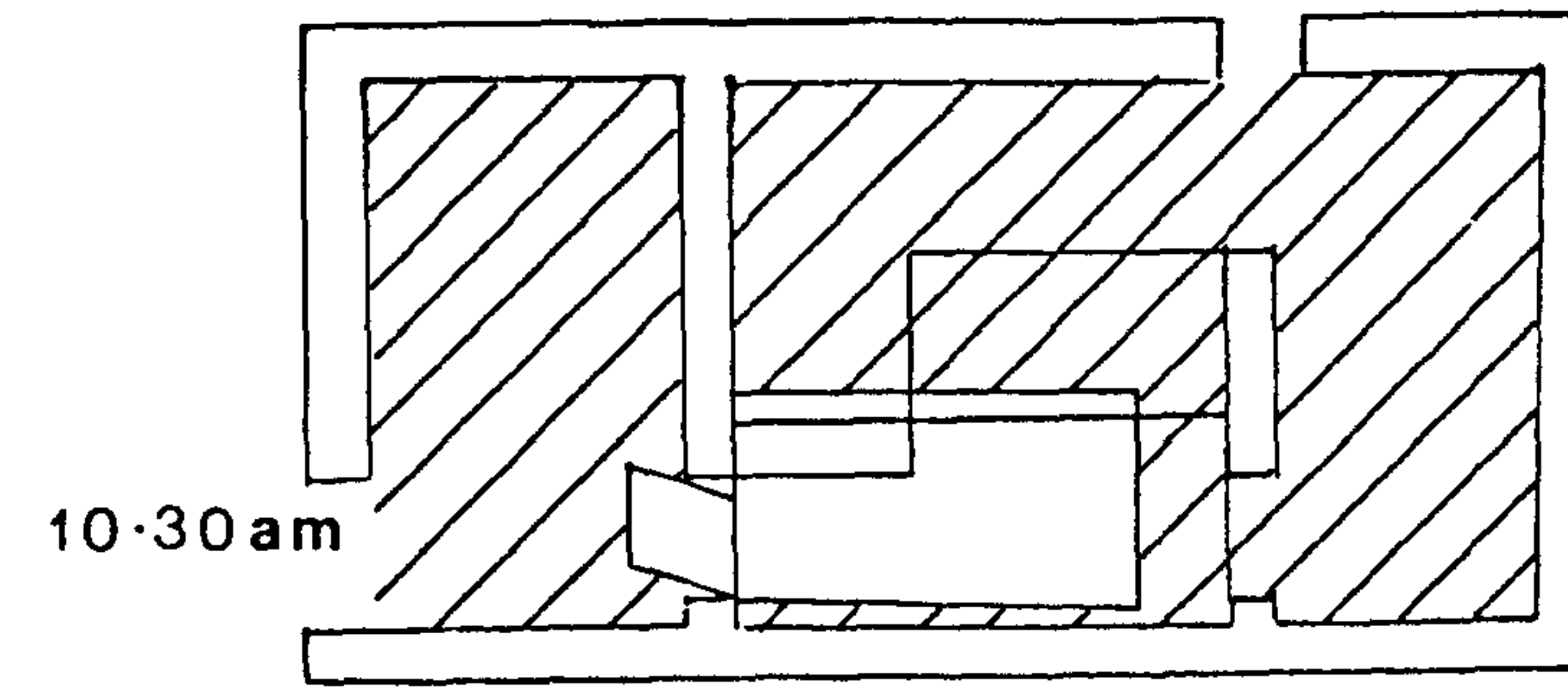
12:00 noon



97.5°

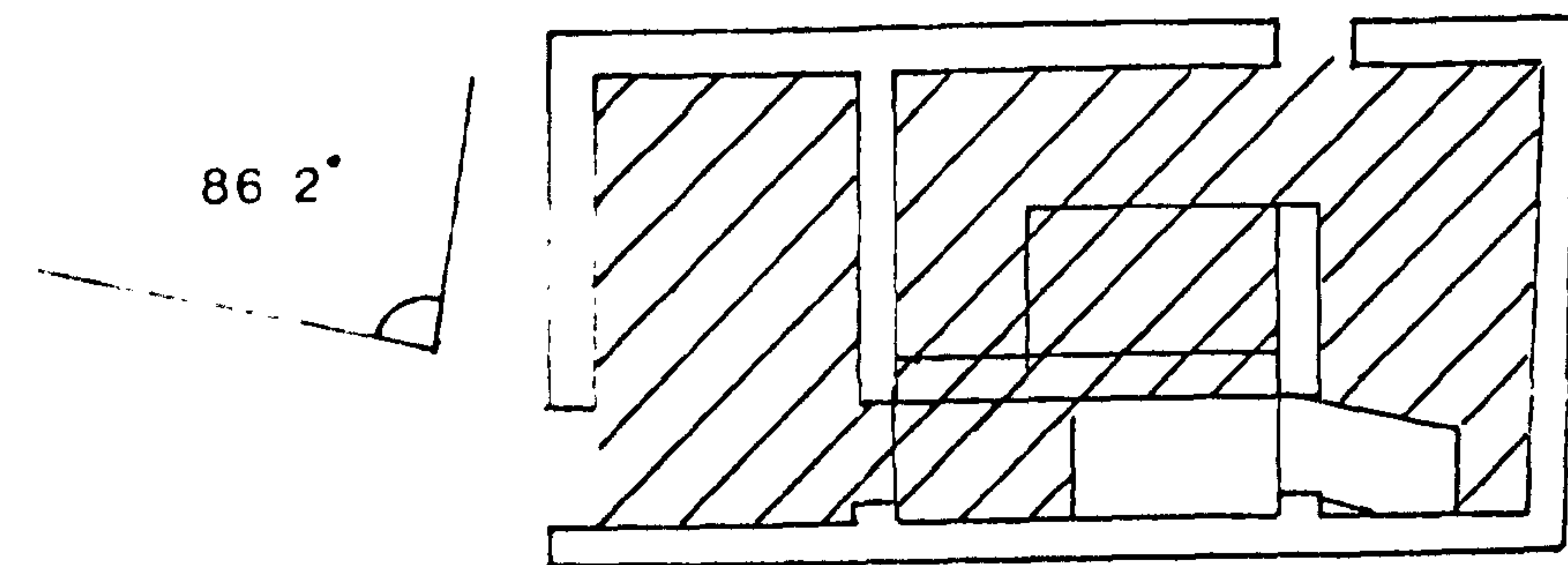
1:30pm

180°



10:30am

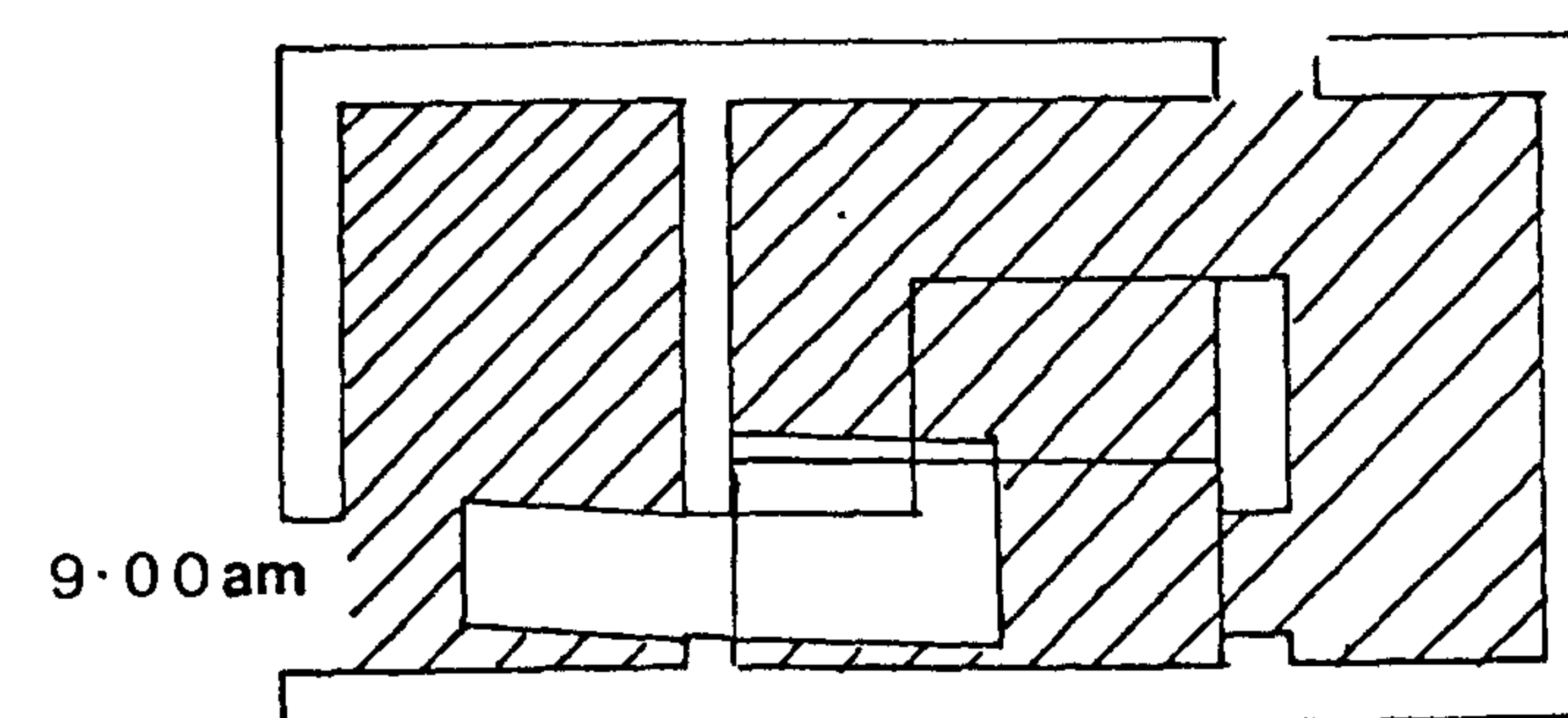
97.5°



86.2°

3:00pm

N

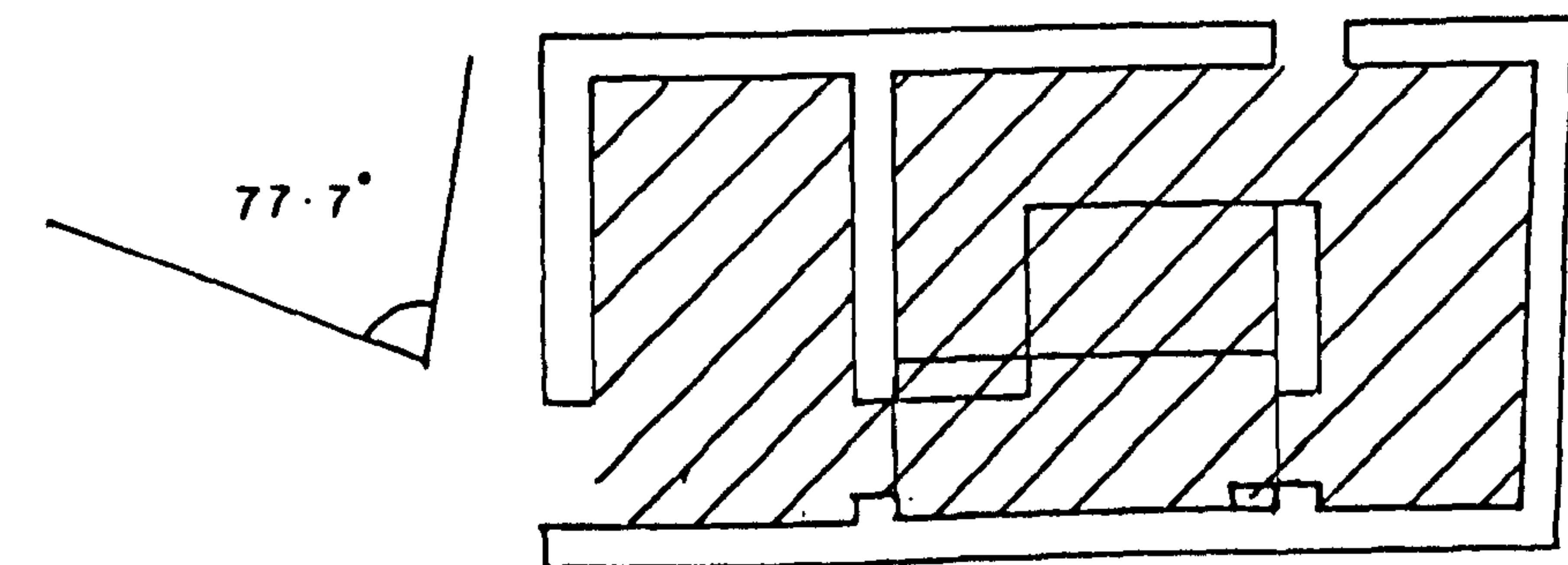


9:00am

86.2°

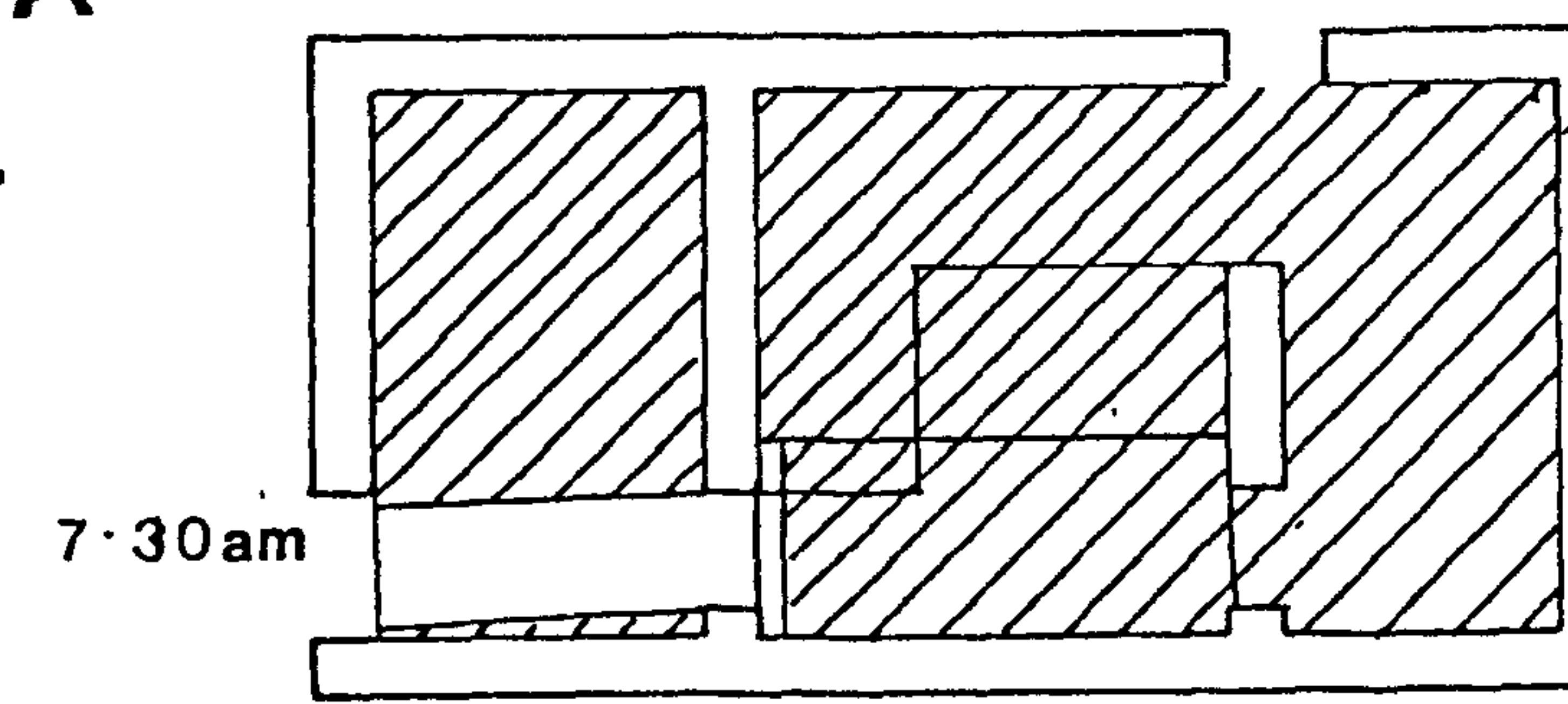
EL - AMARNA

Midsummer



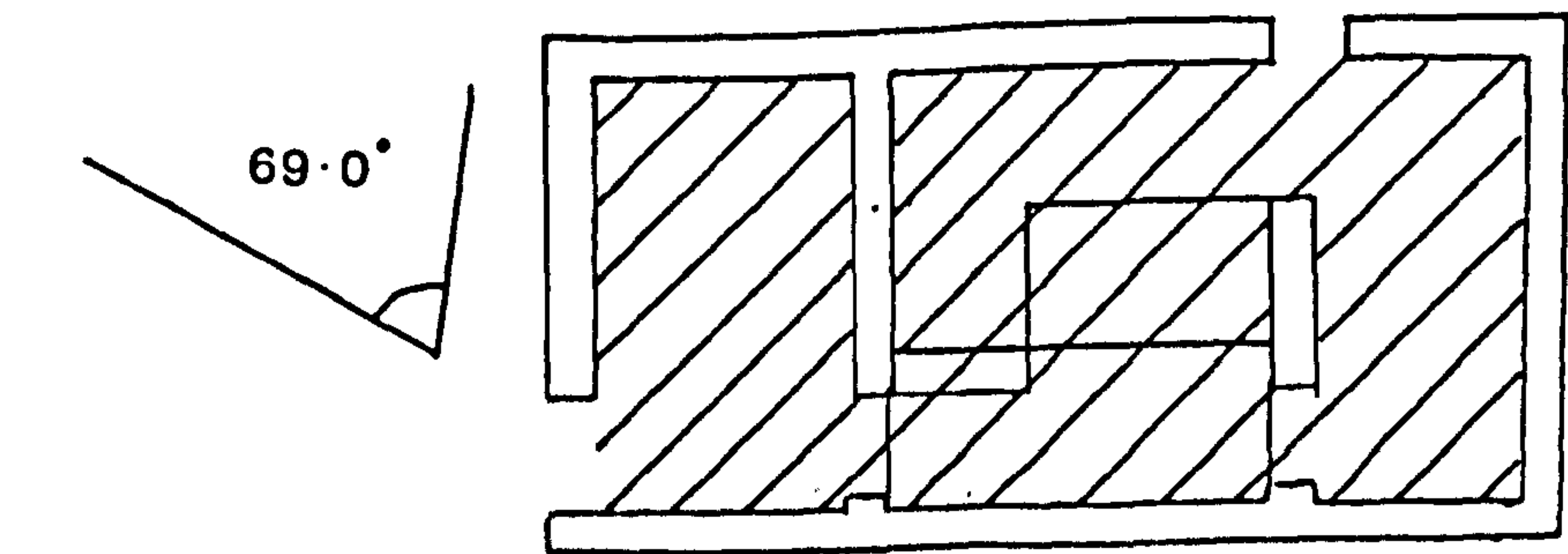
77.7°

4:30pm



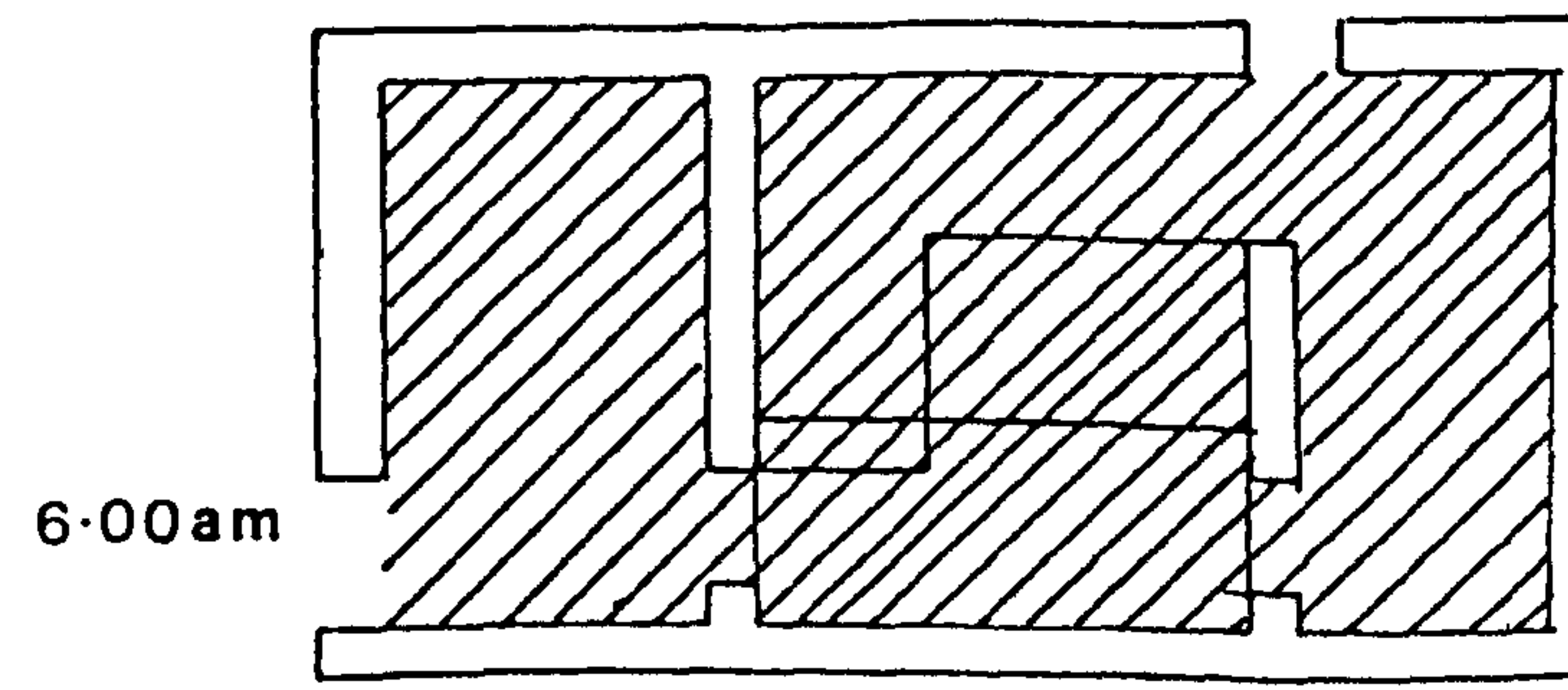
7:30am

77.7°



69.0°

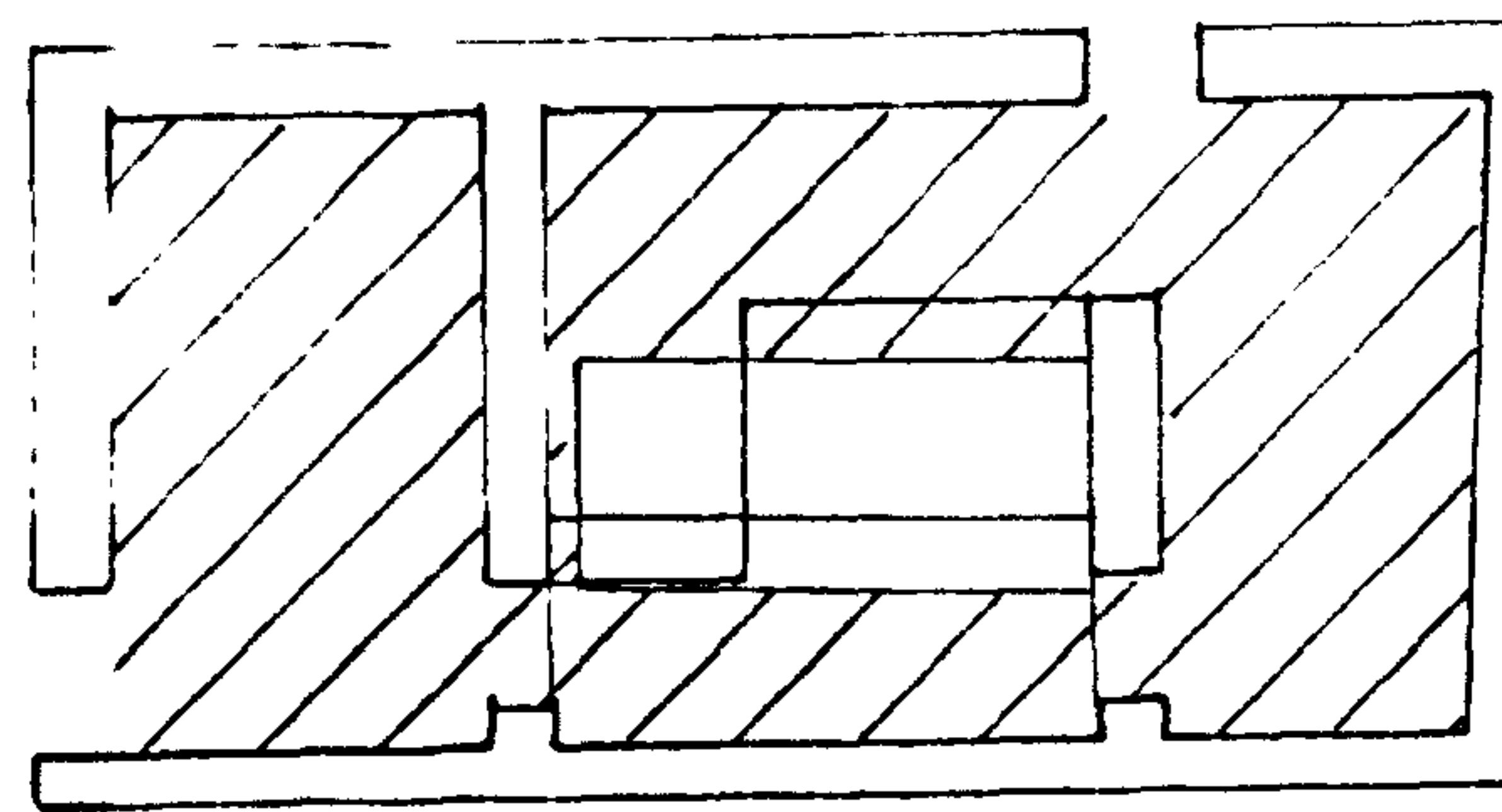
6:00pm



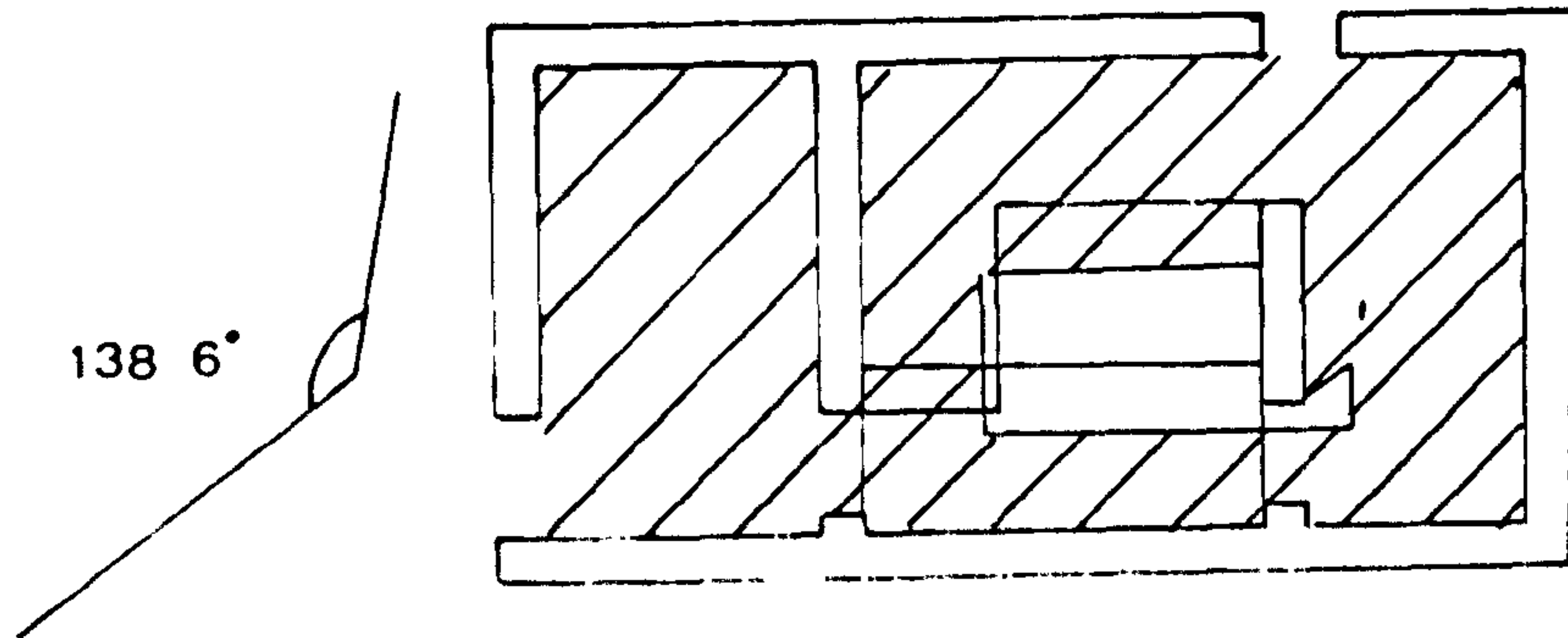
6:00am

69.0°

1:150



12:00 noon

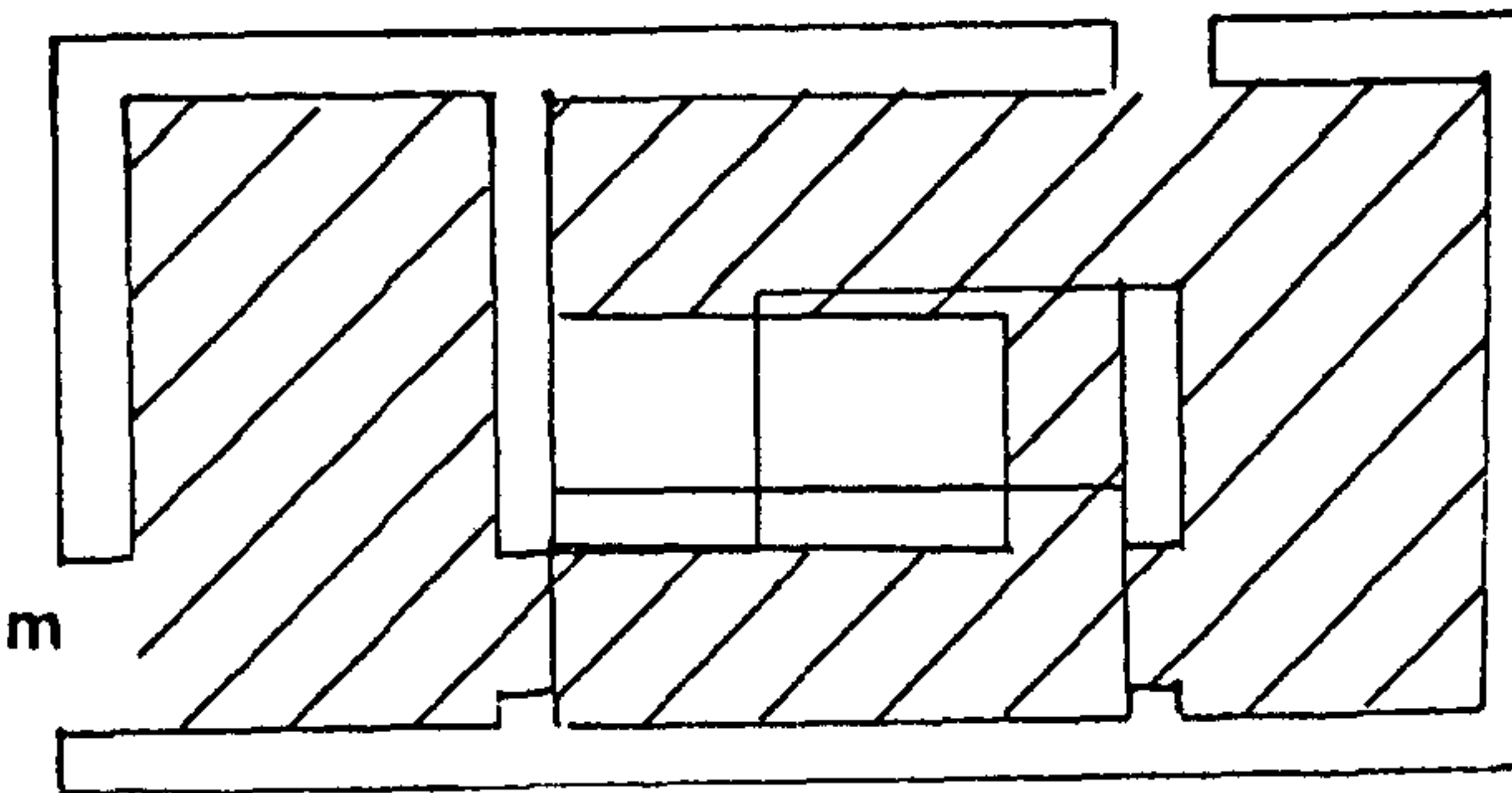


138.6°

1:30 pm

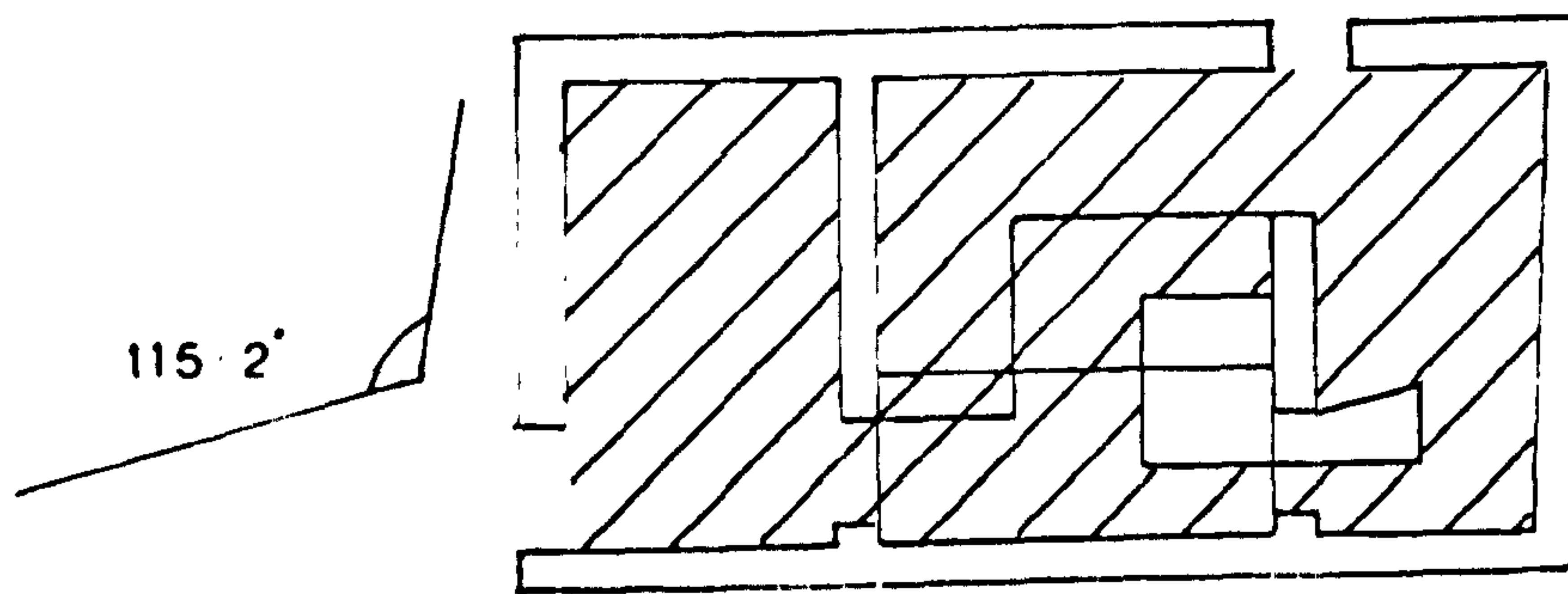
180°

N



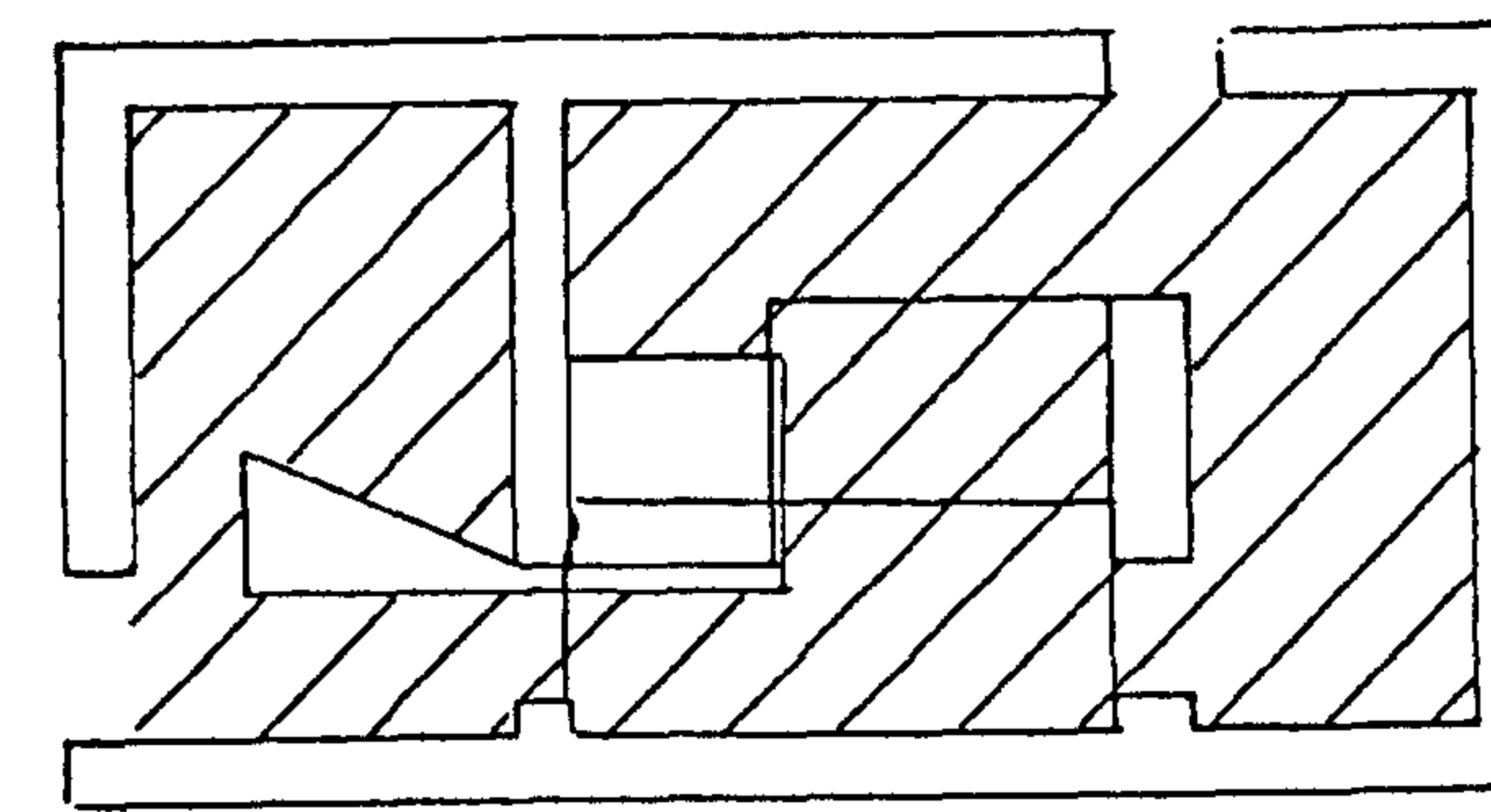
138.6°

10:30 am



115.2°

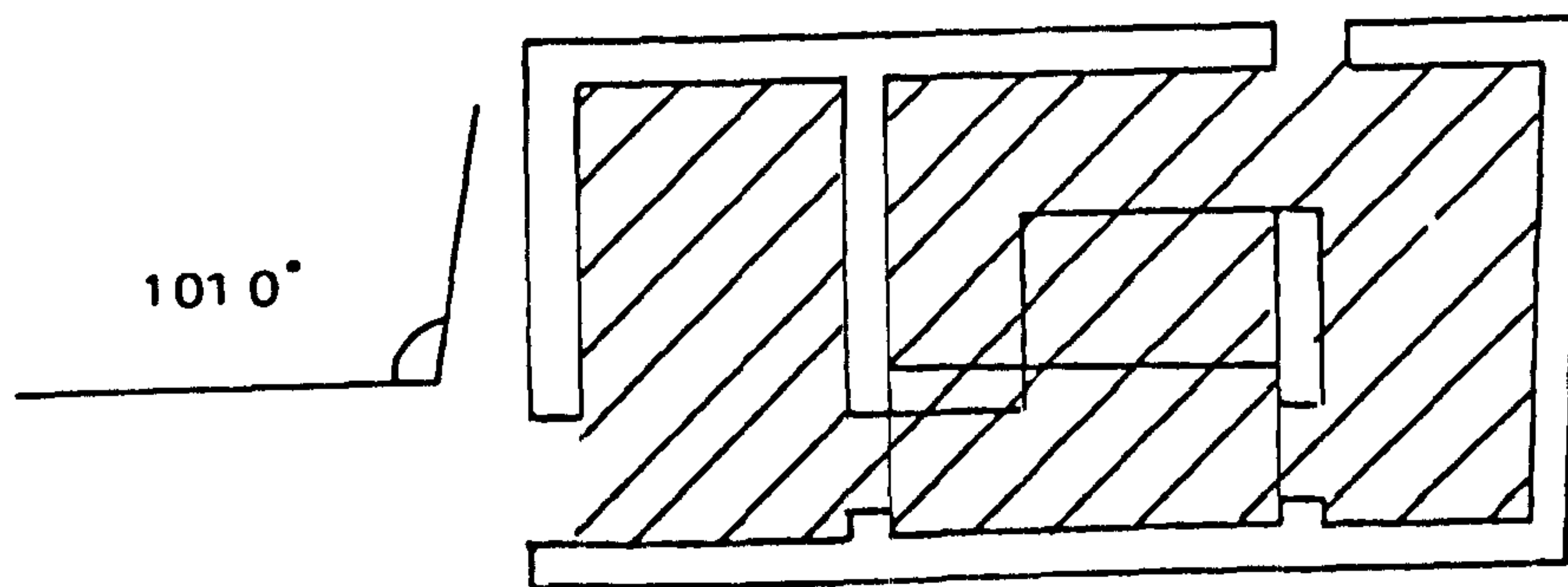
3:00 pm



115.2°

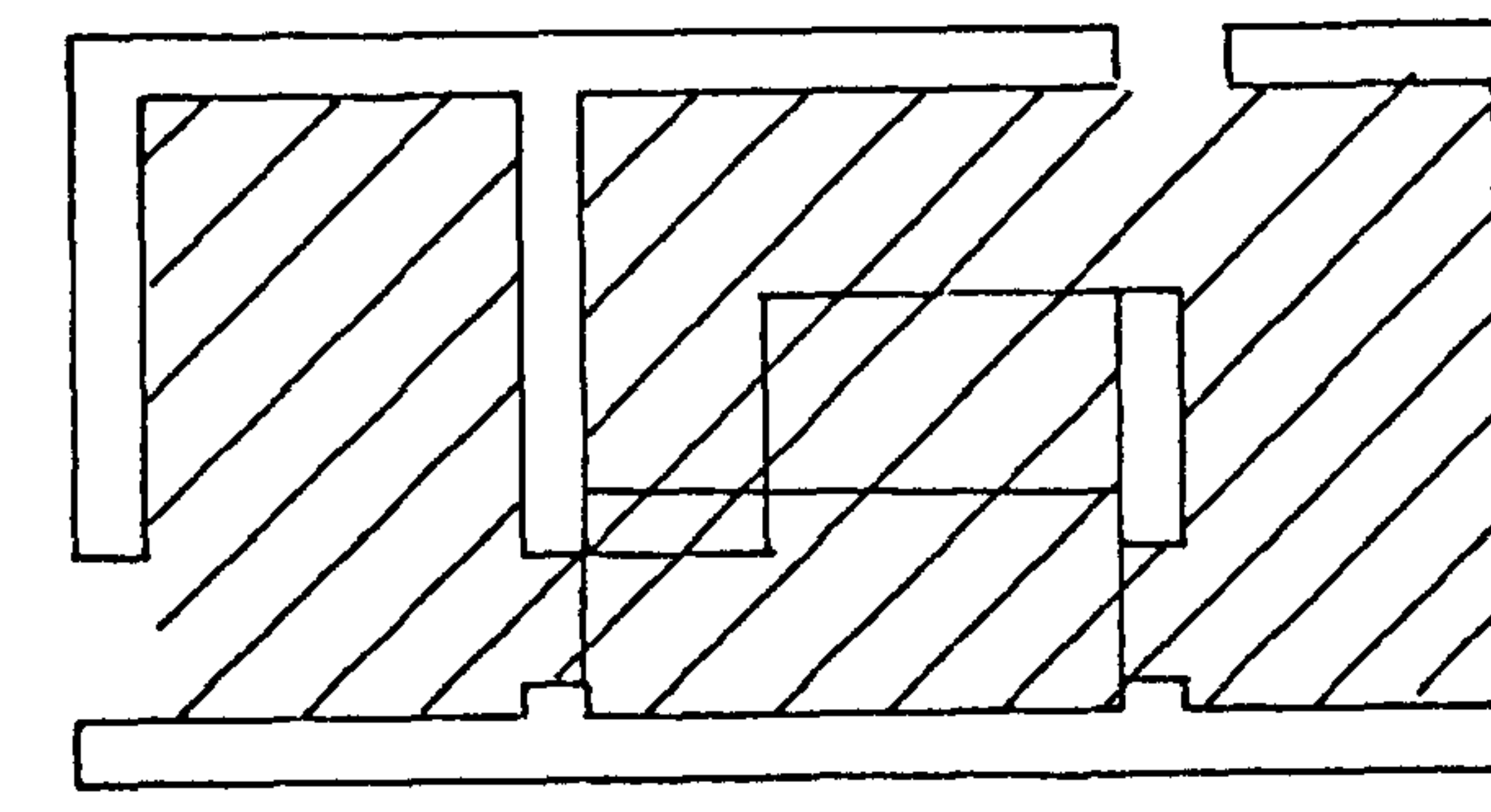
9:00 am

EL-AMARNA **Spring & Autumn** **Equinox**



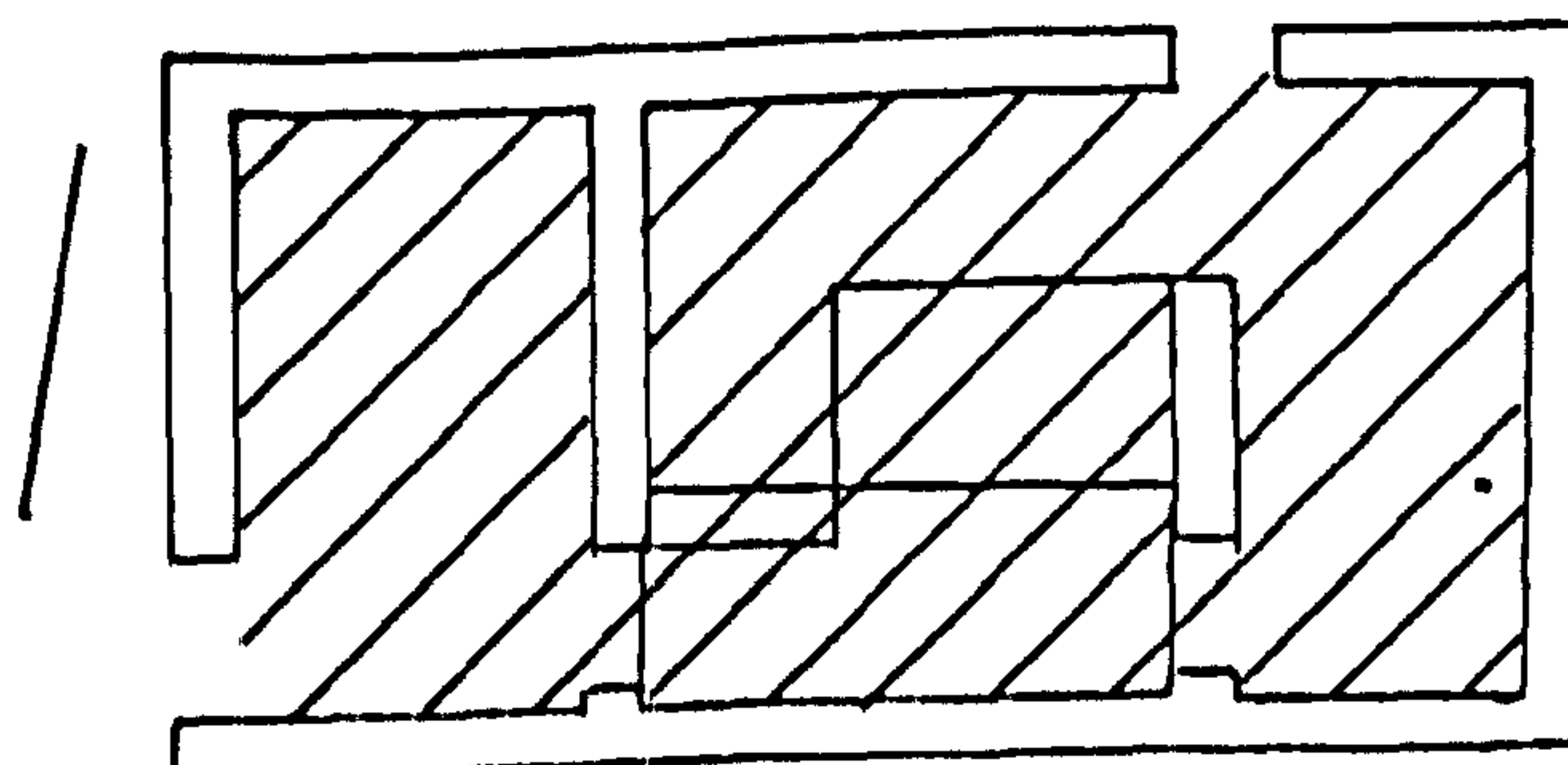
101.0°

4:30 pm

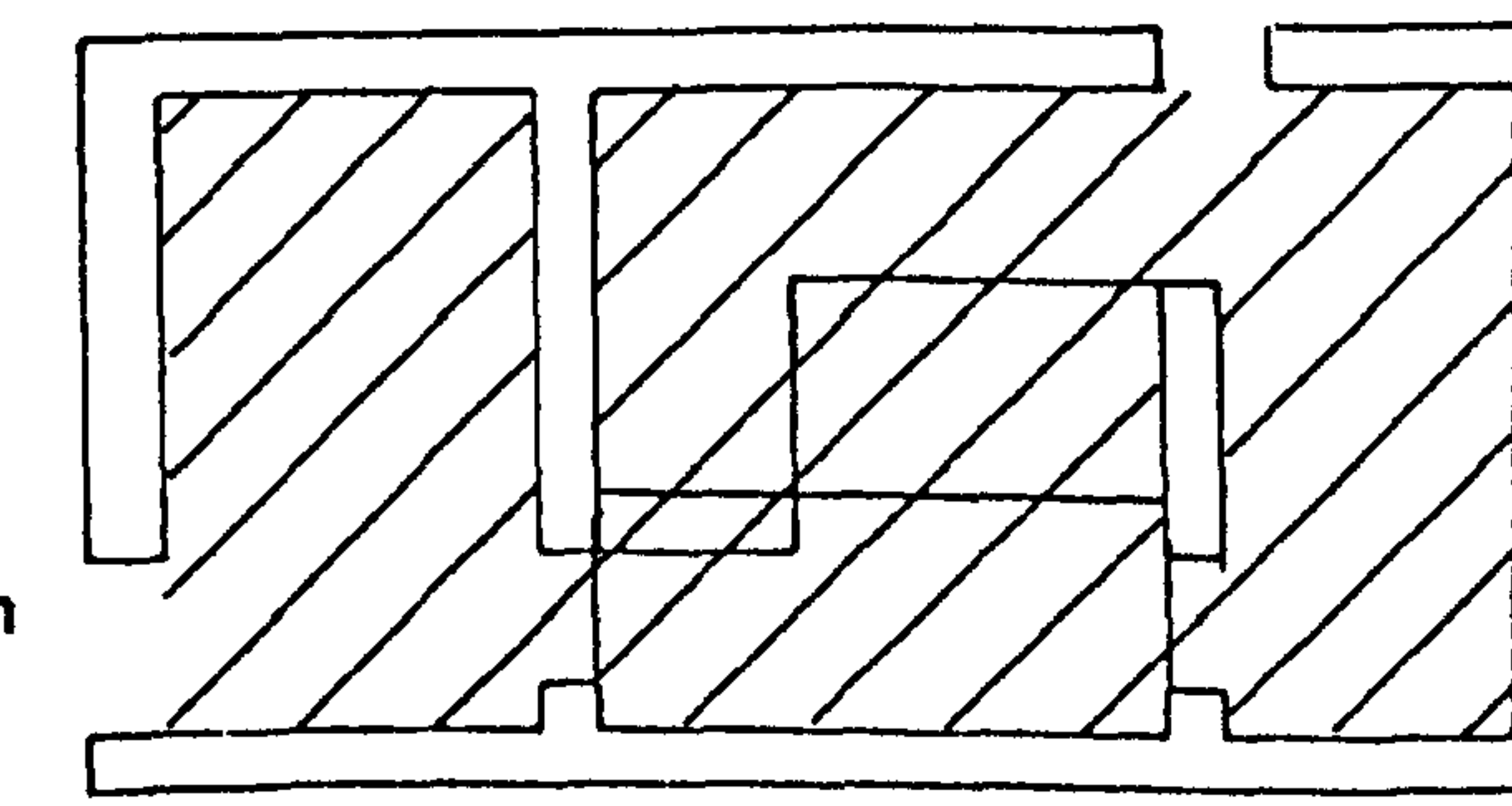


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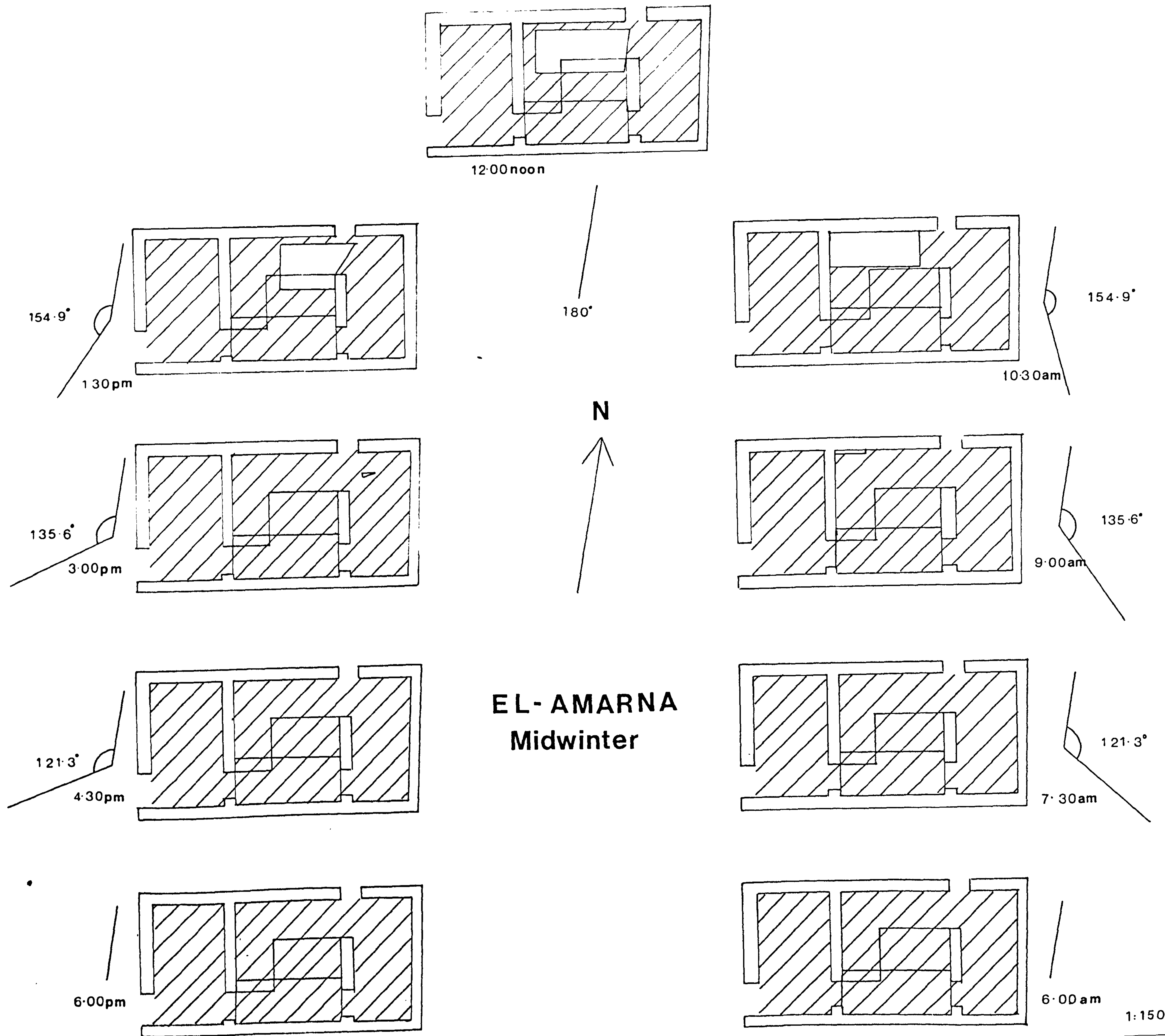


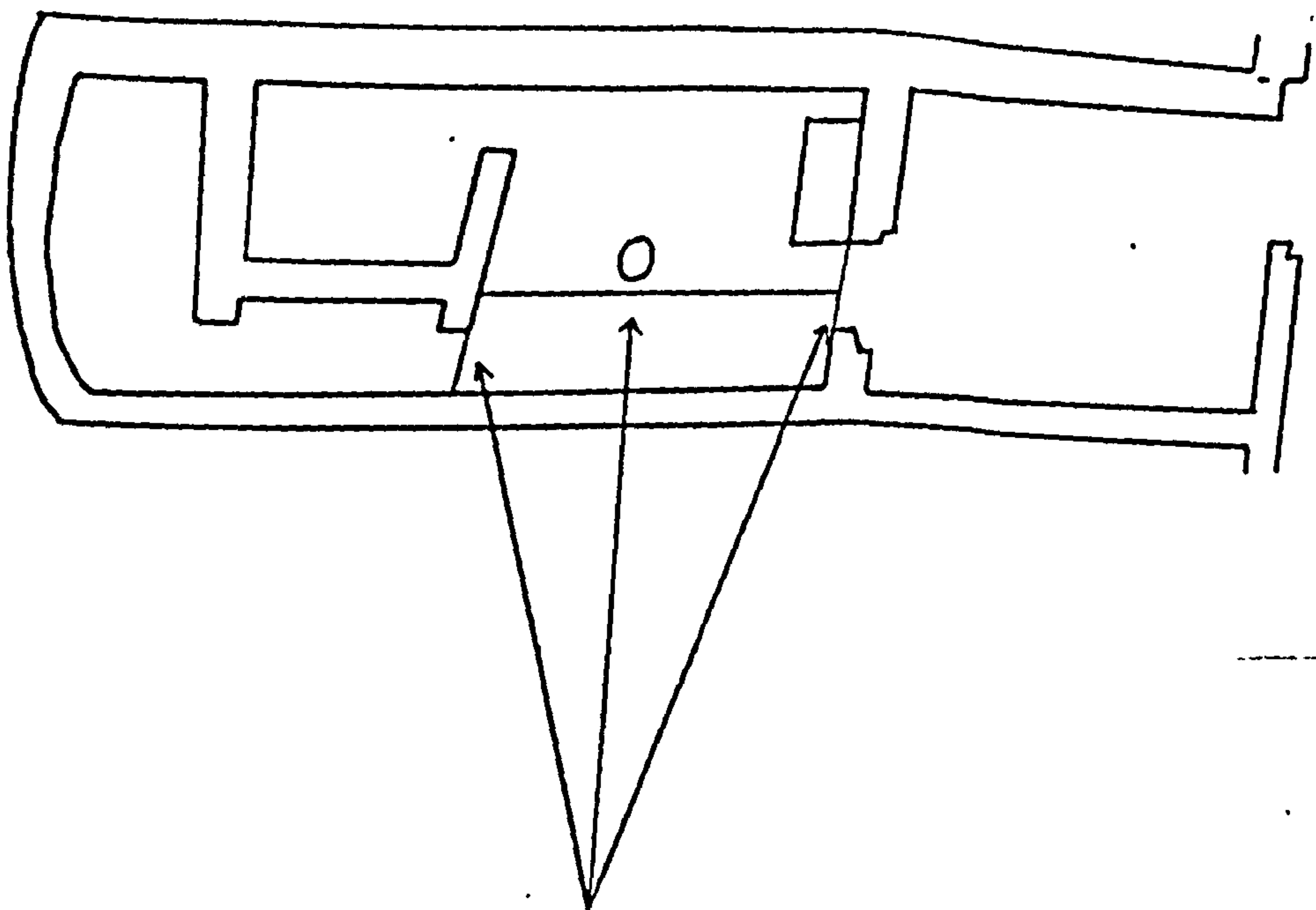
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6:00 am

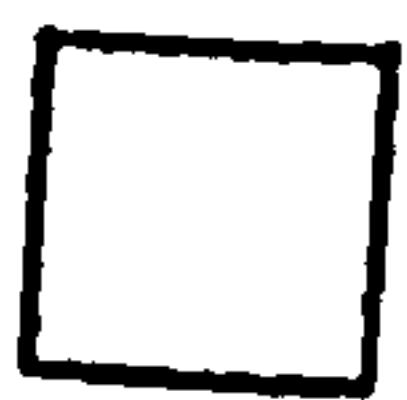
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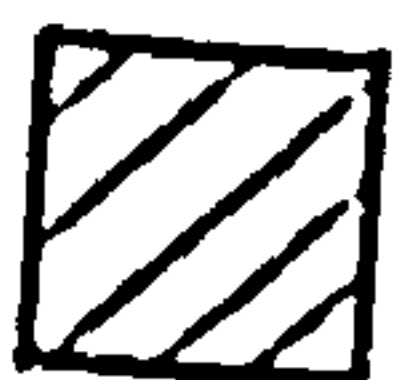


key

edge of roof



sun on floor

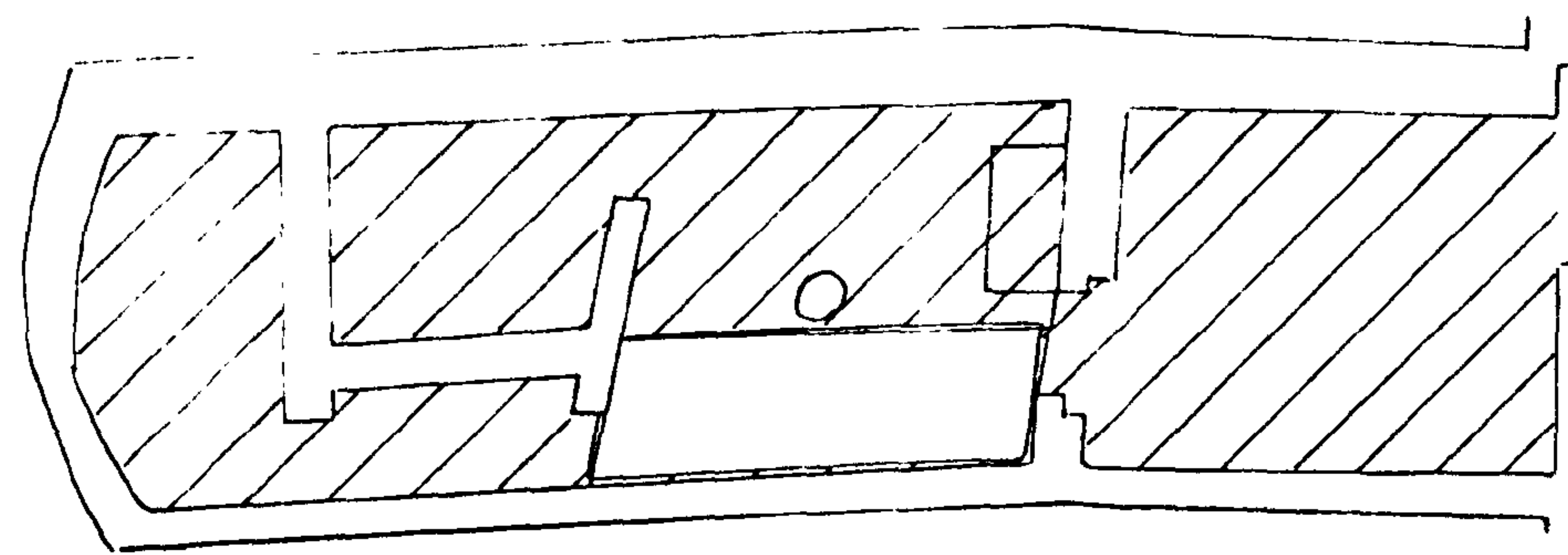


shadow

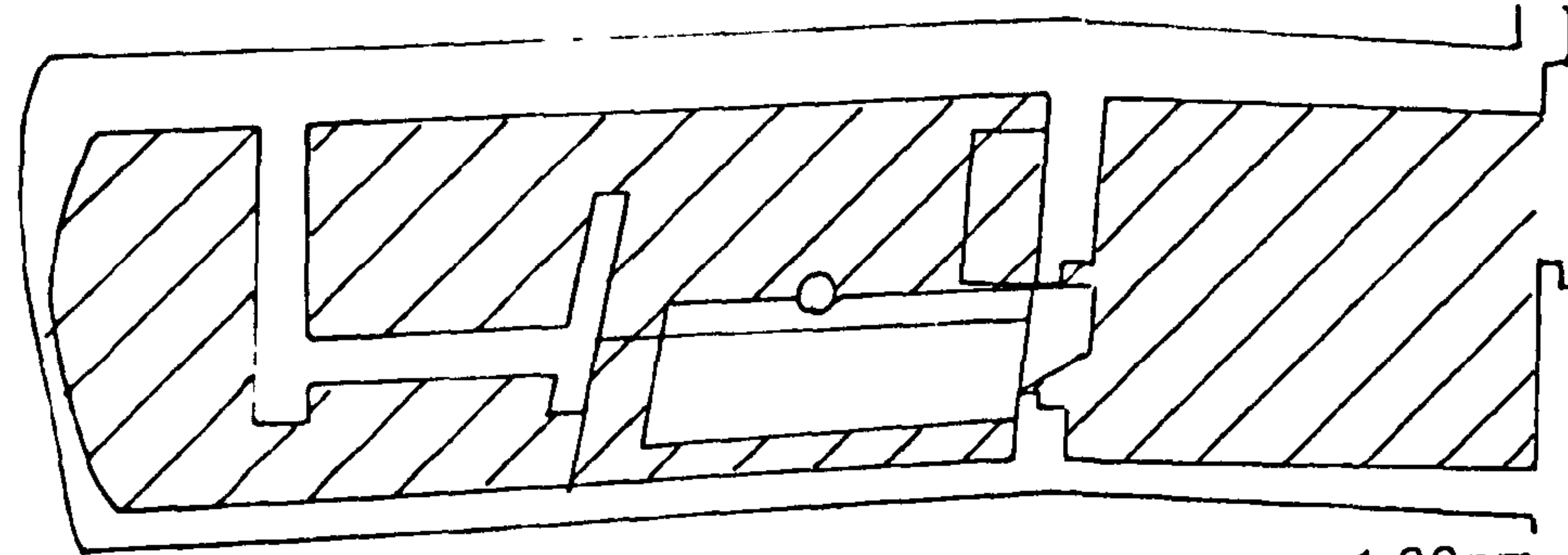
} in following plates

DEIR EL-MEDINA

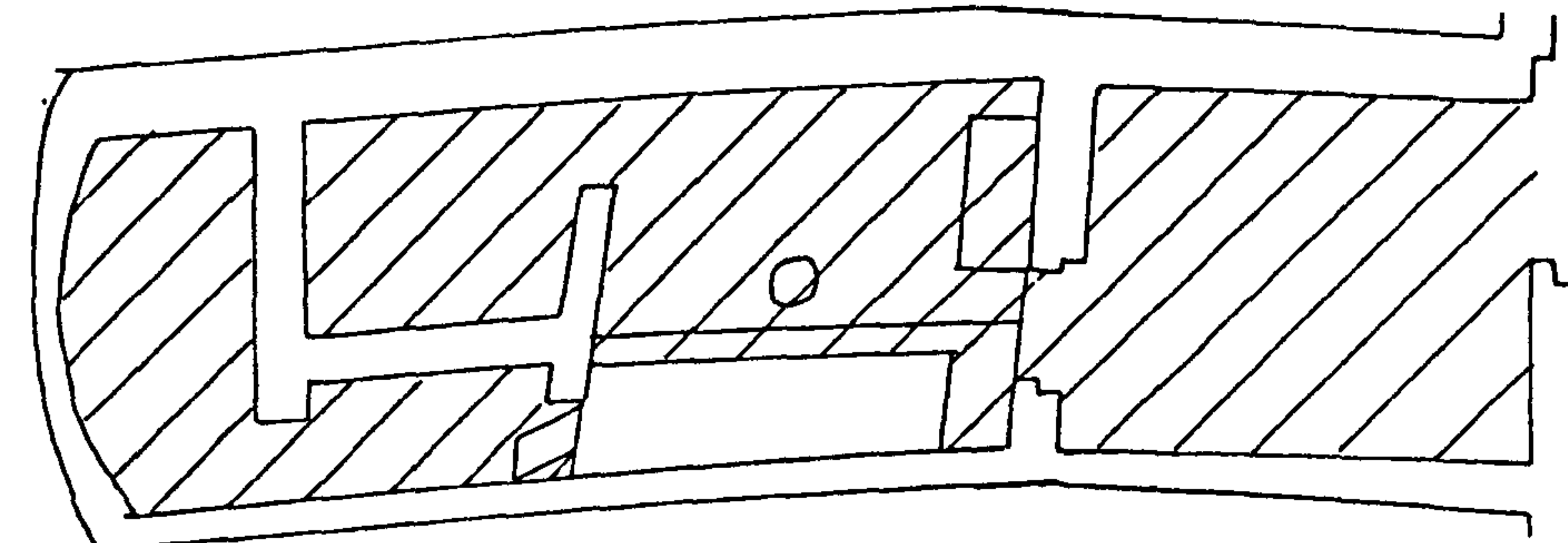
Midsummer



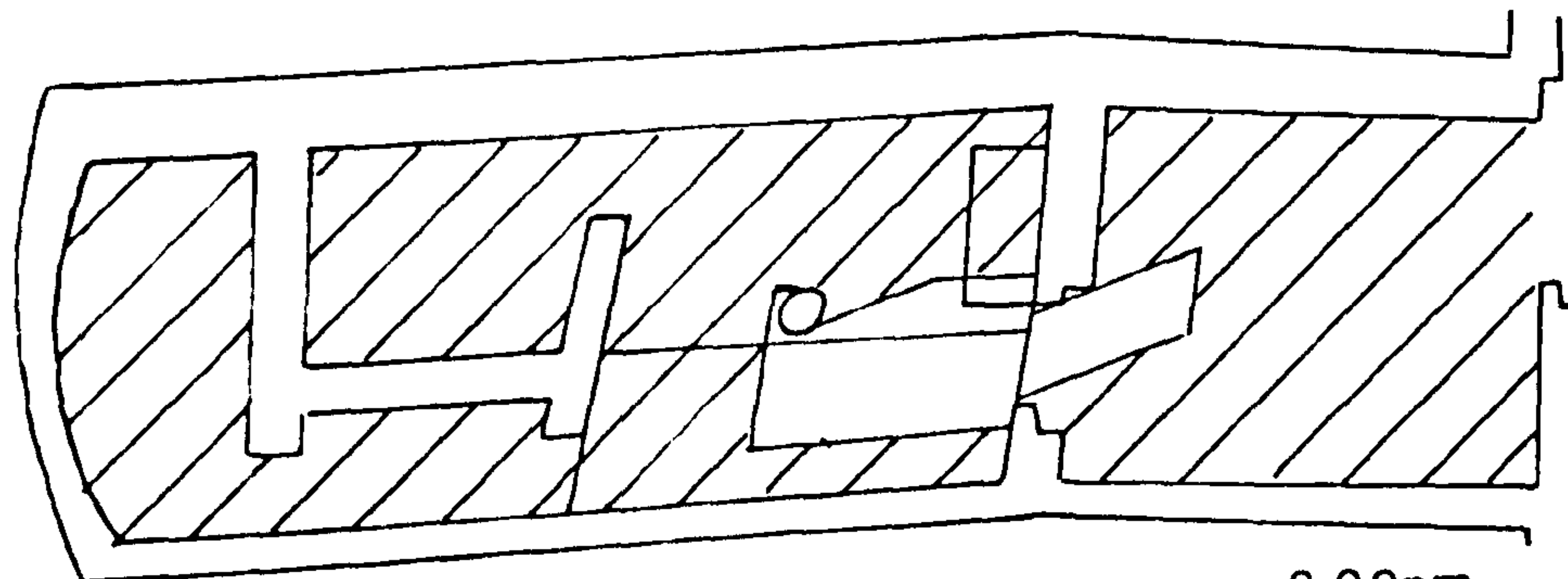
12·00 noon



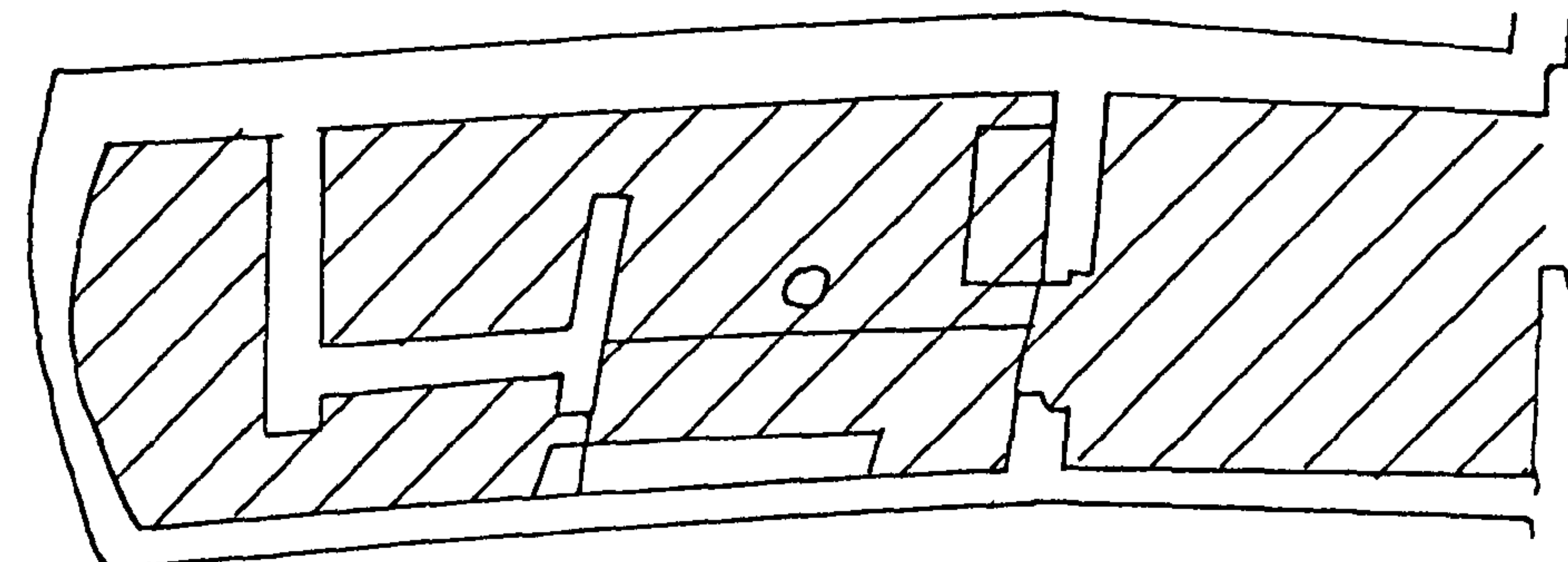
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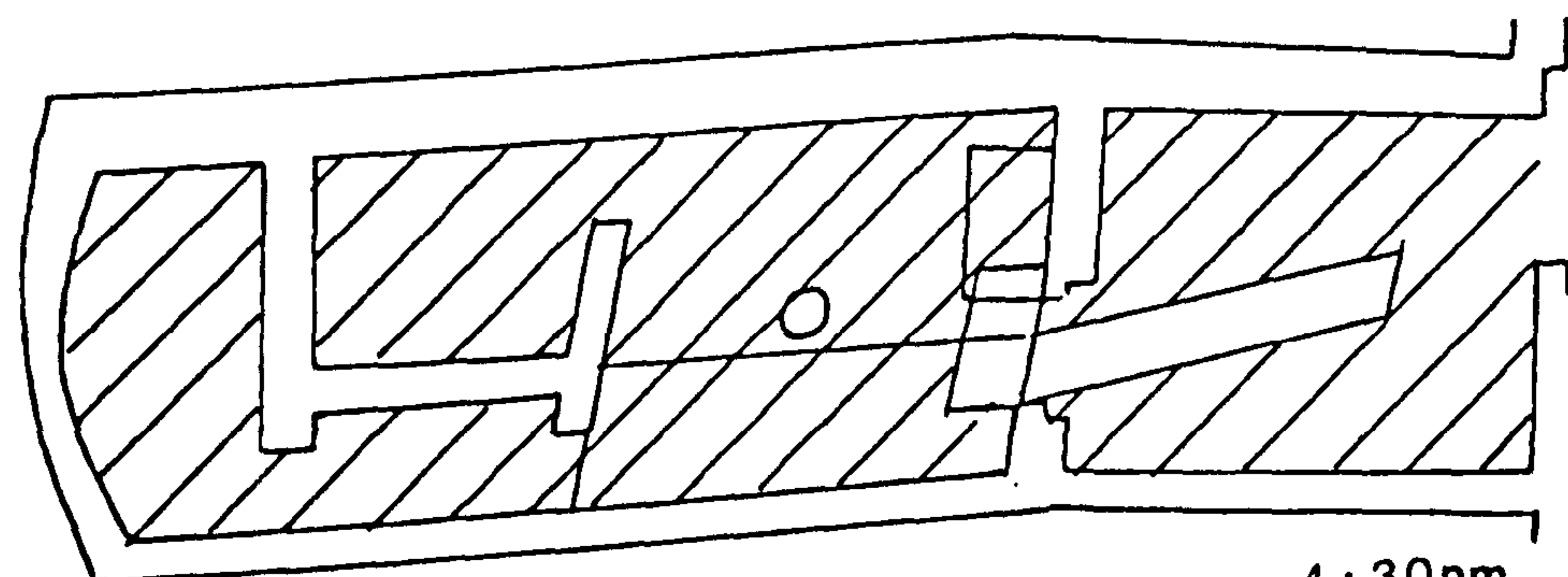
10·30 am



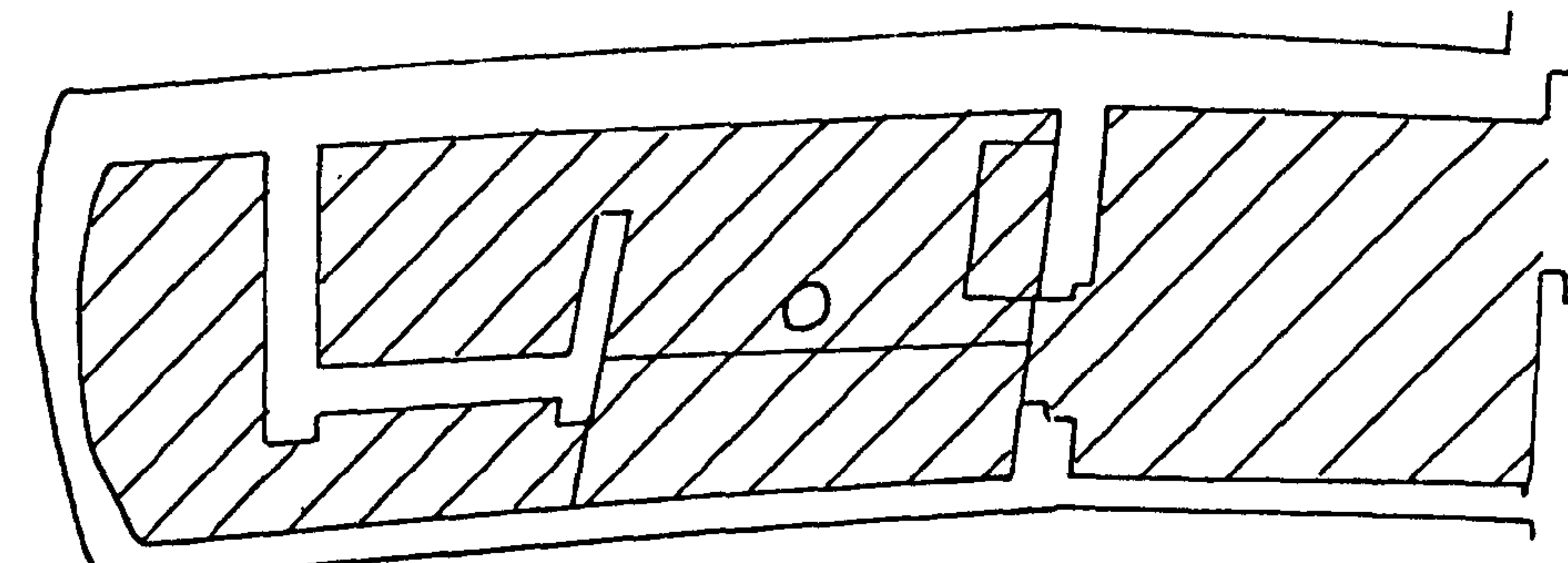
3·00 pm



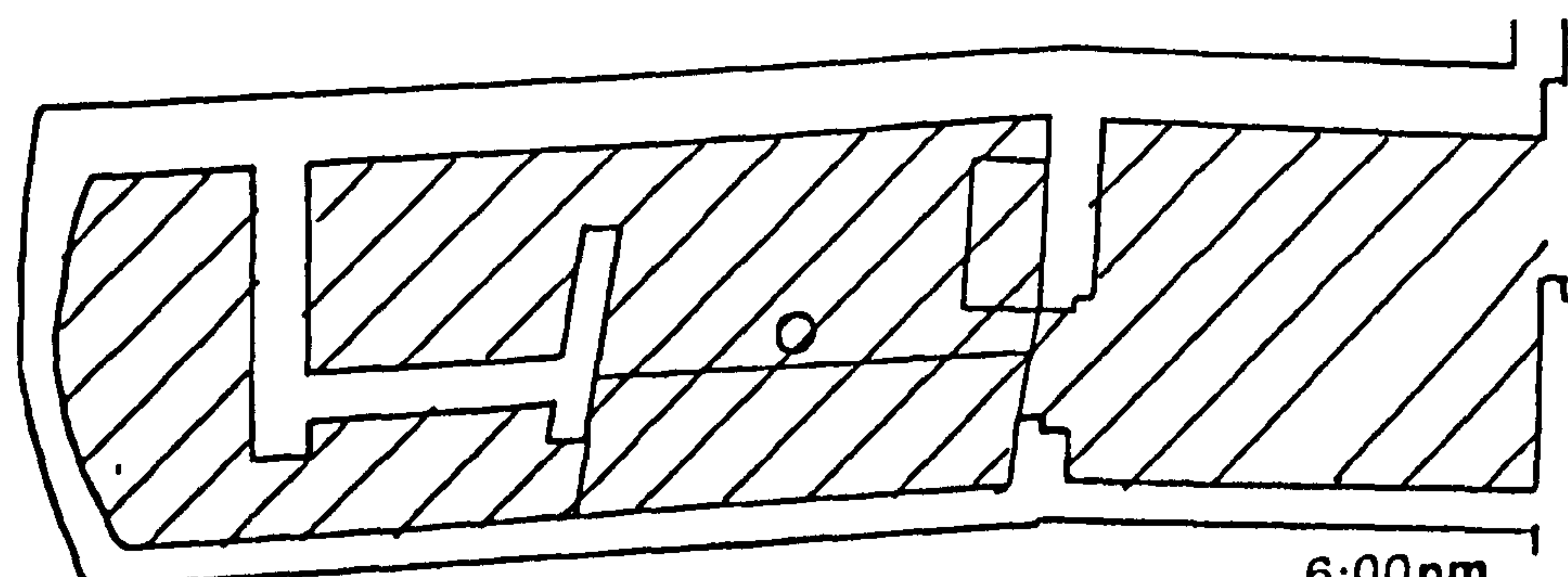
9·00 am



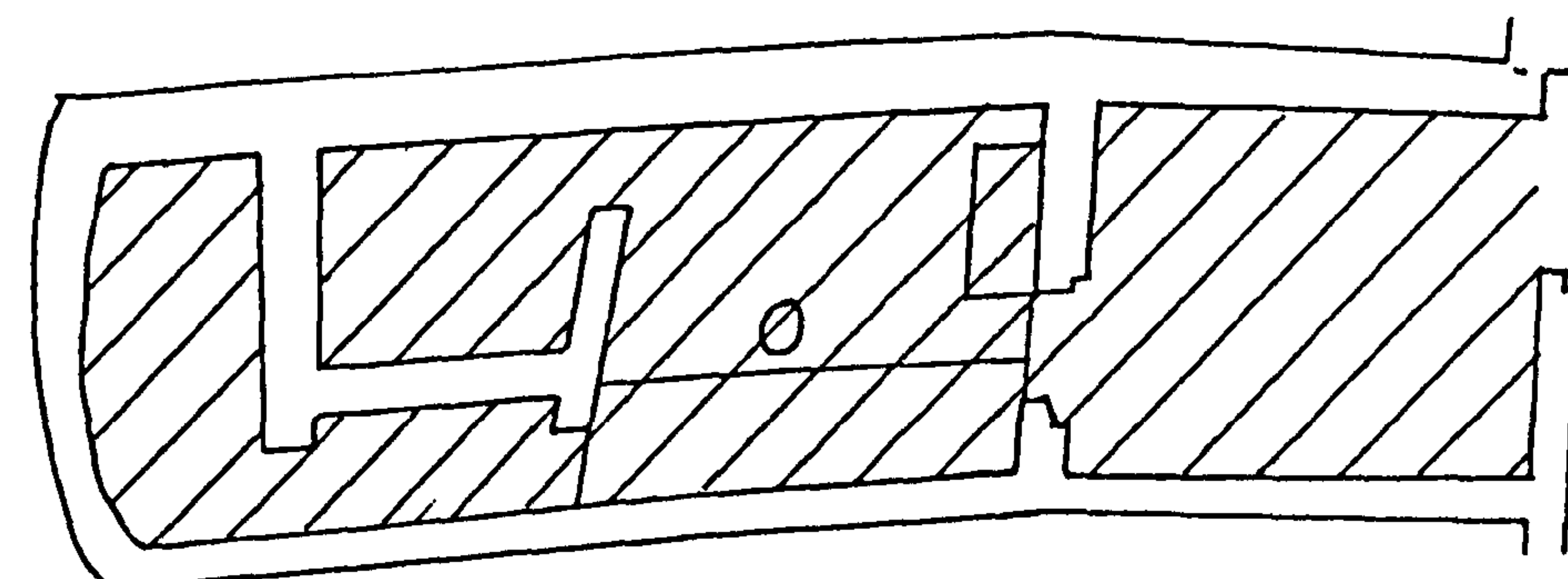
4·30 pm



7·30 am



6·00 pm



6·00 am

N

91·3°

180°

91·3°

83·2°

83·2°

76·3°

76·3°

69·0°

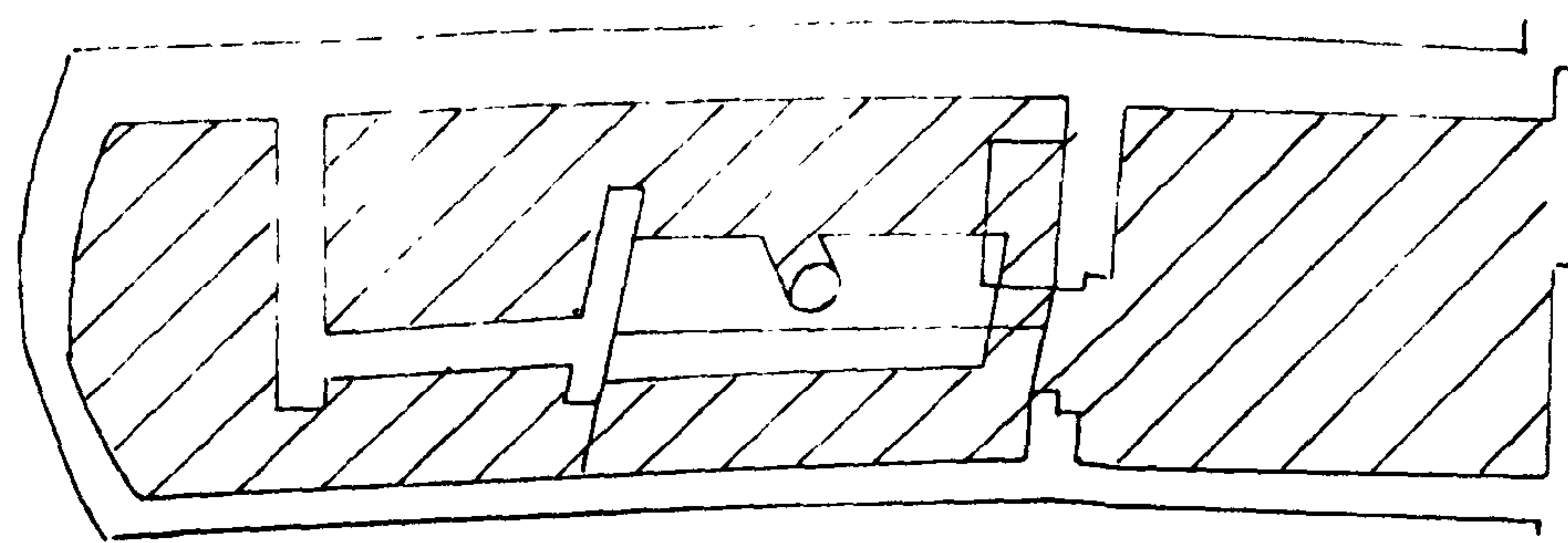
69·0°

1:150

DEIR EL-MEDINA

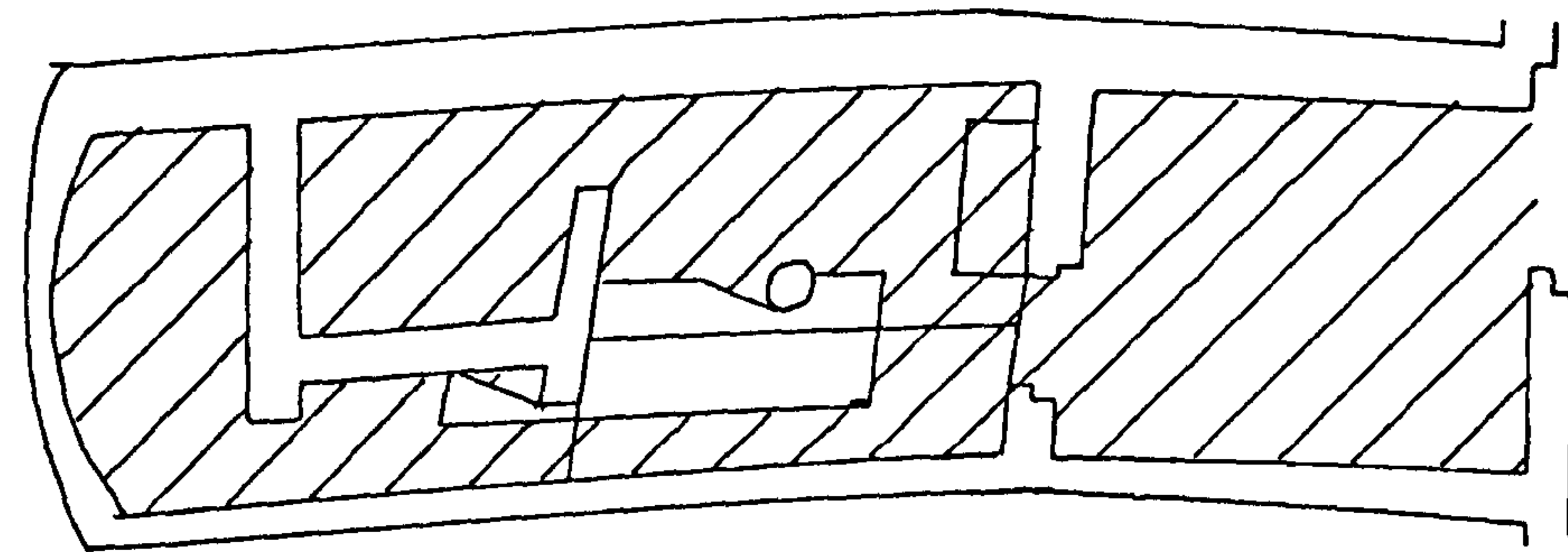
Spring & Autumn

Equinox



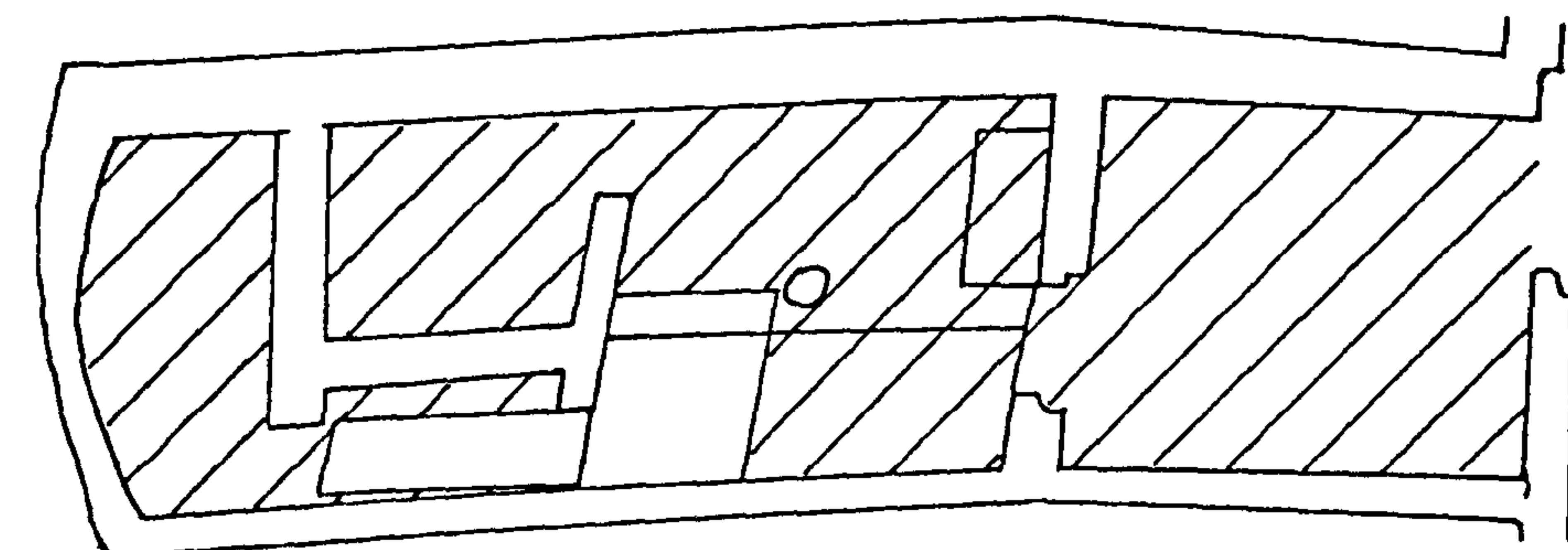
12·00noon

180°



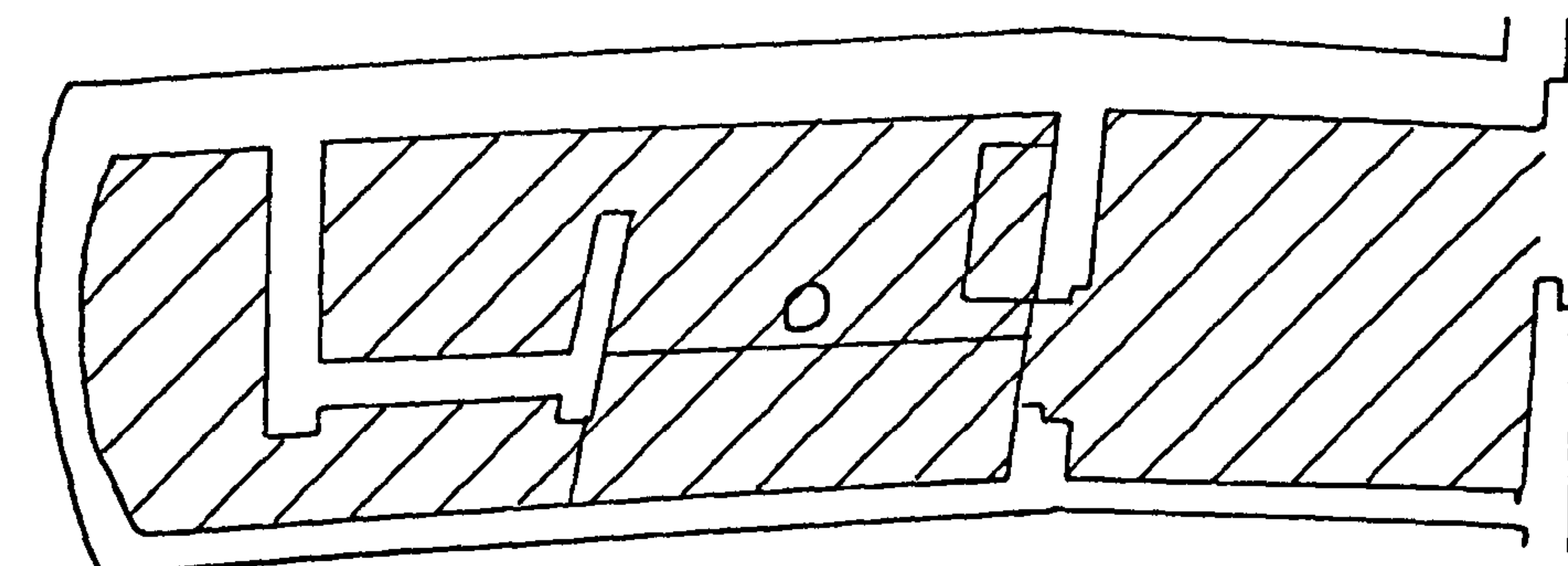
10·30am

136·3°



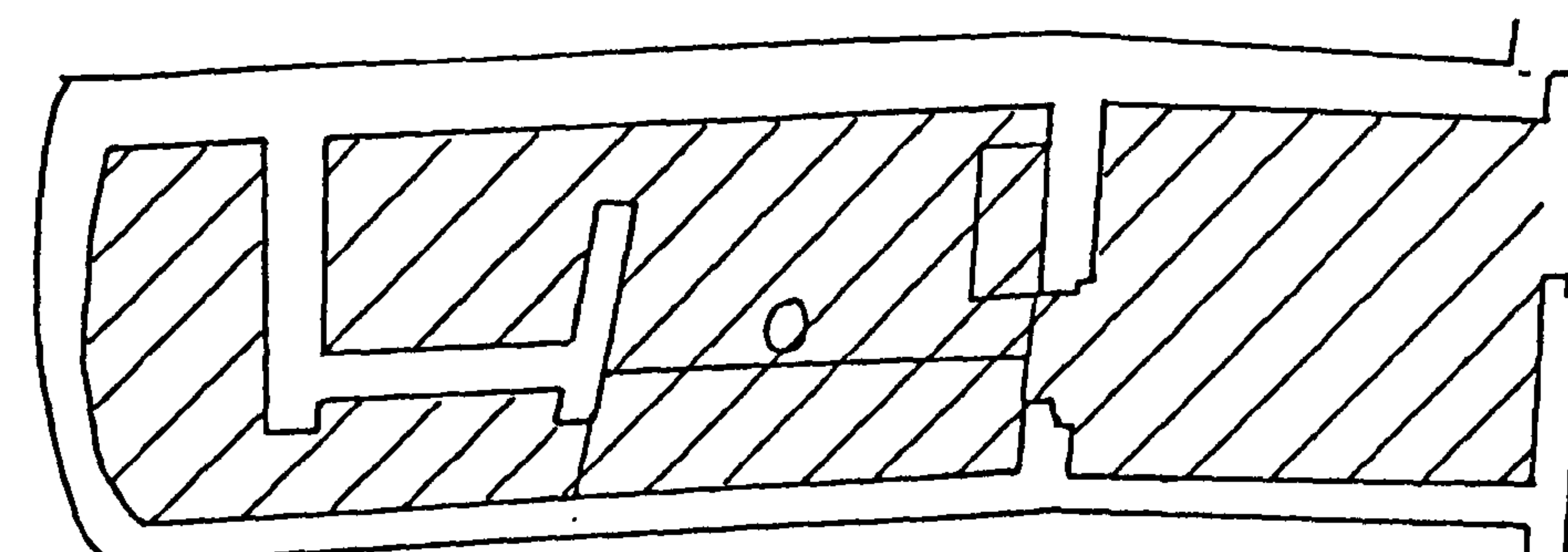
9·00am

113·4°



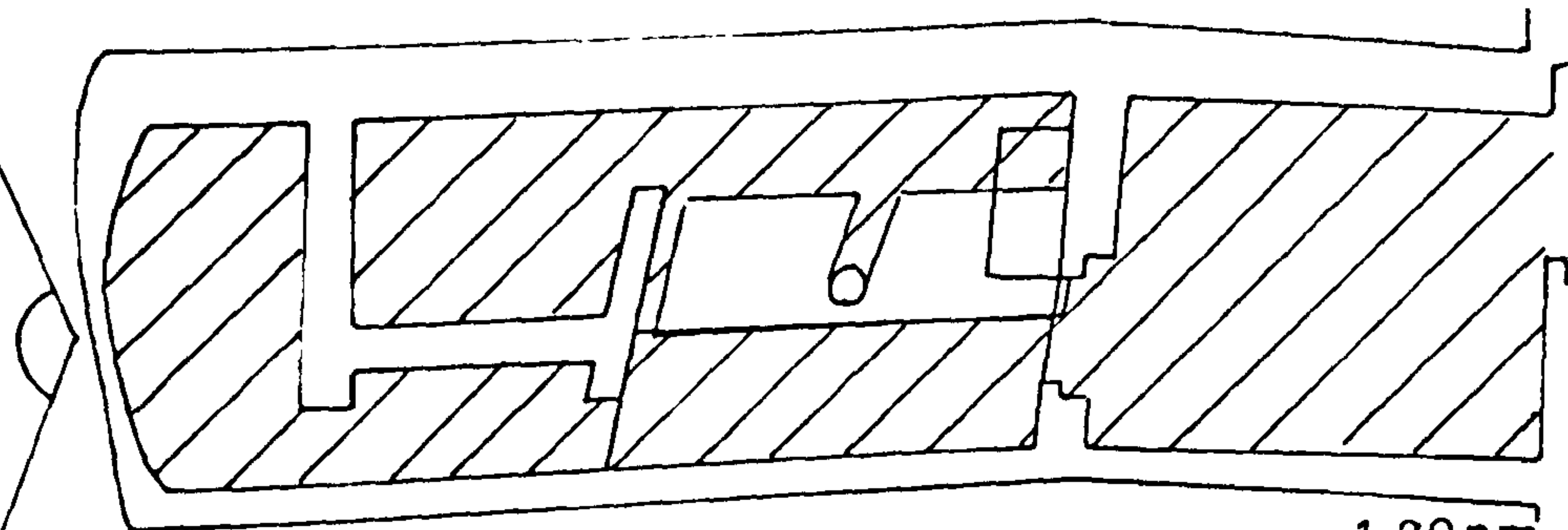
7·30am

100·2°



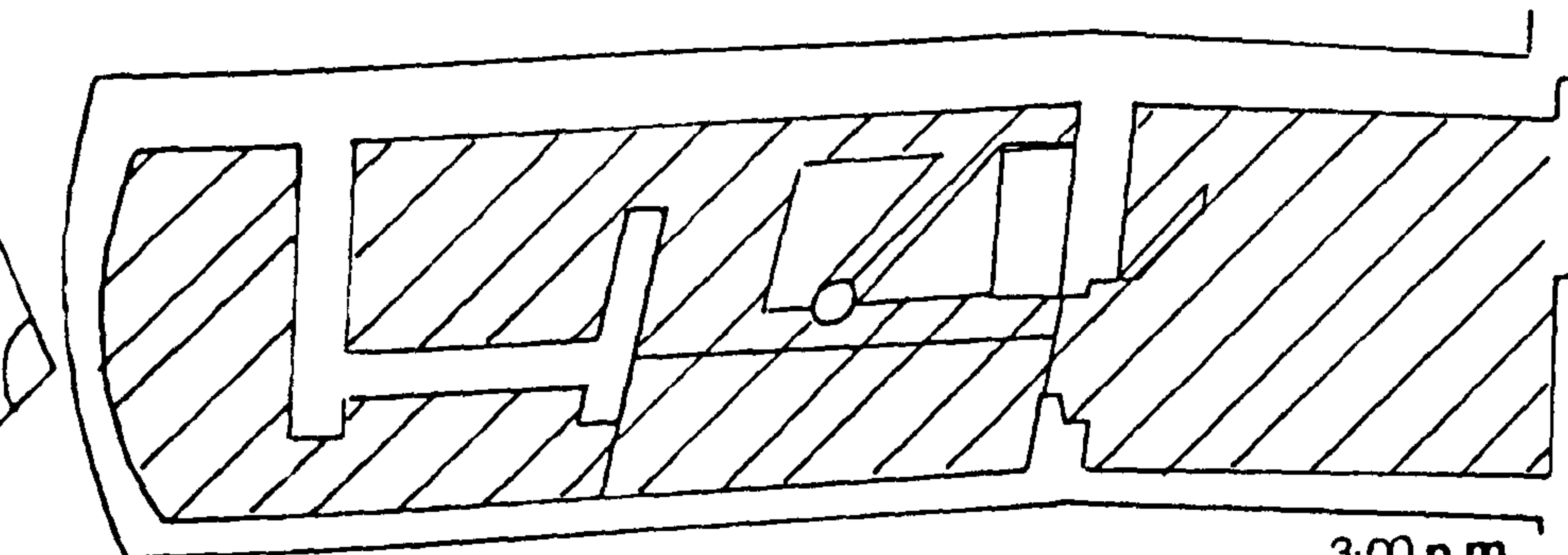
6·00am

1:150



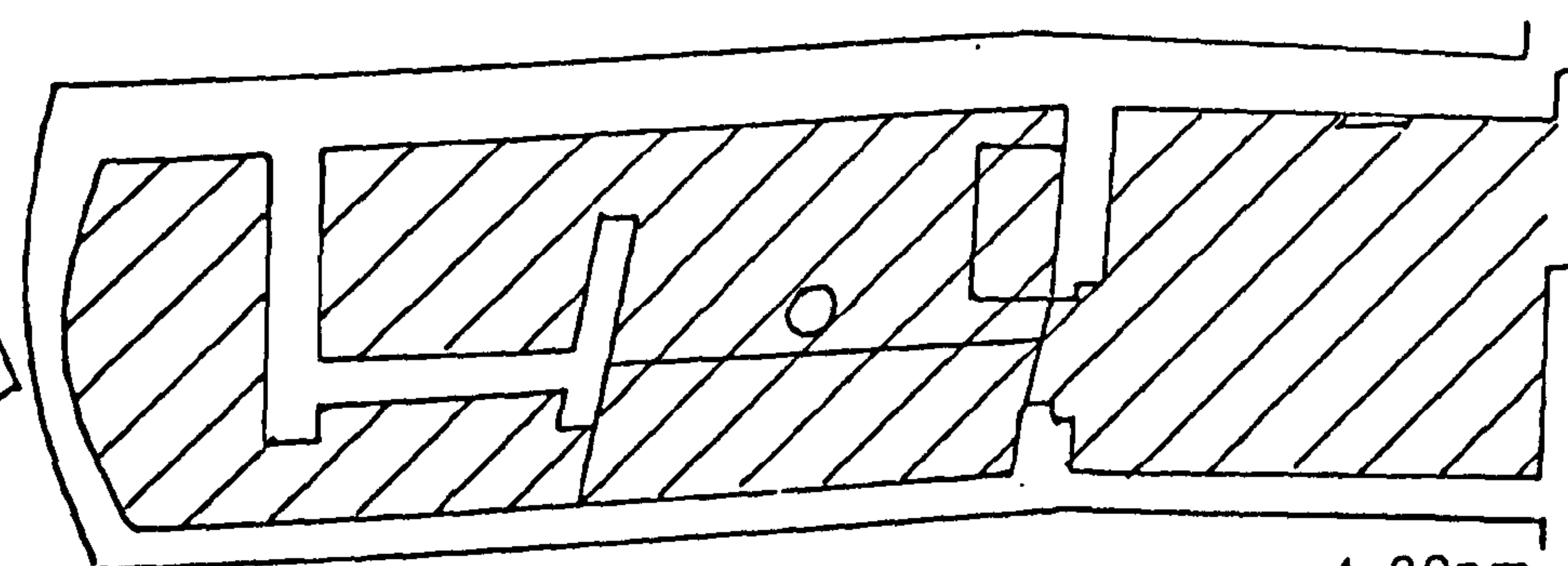
1·30pm

136·3°



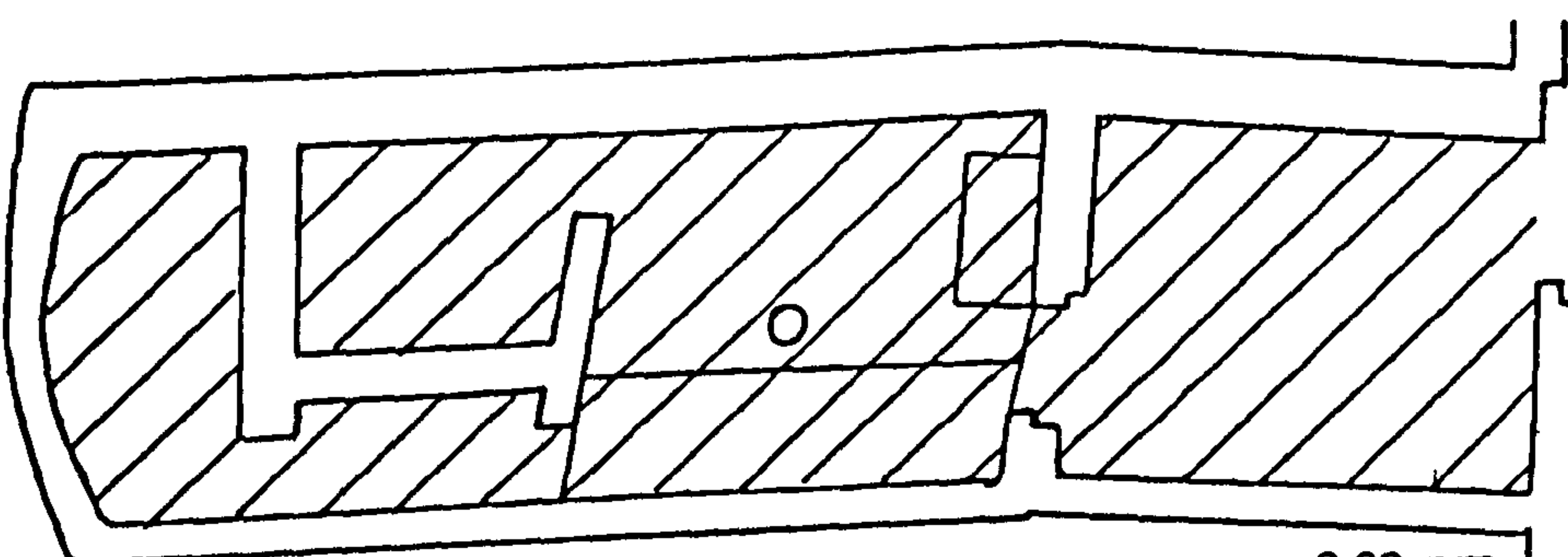
3·00pm

113·4°



4·30pm

100·2°

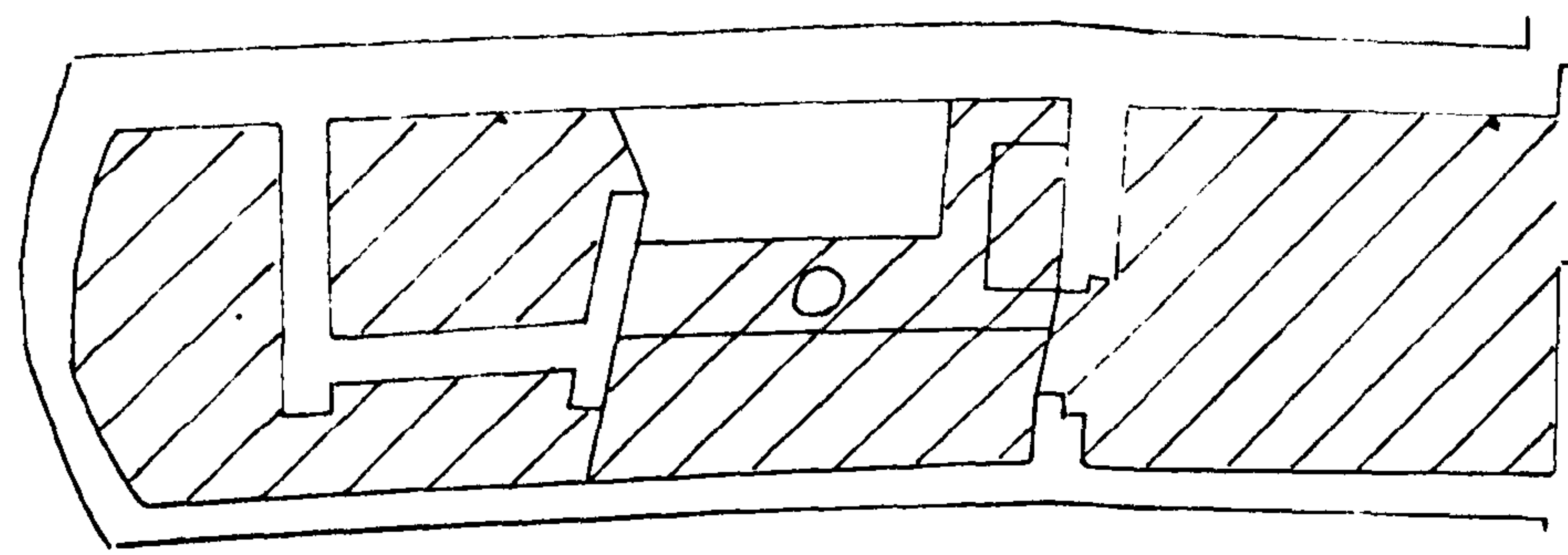


6·00pm

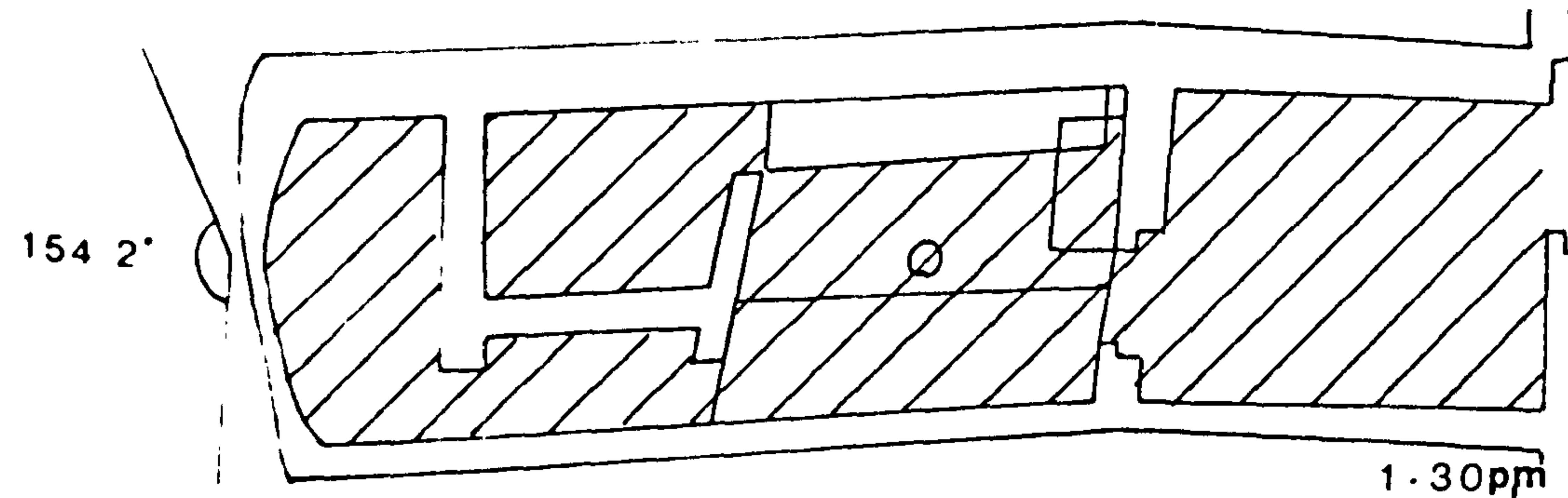
N

DEIR EL-MEDINA

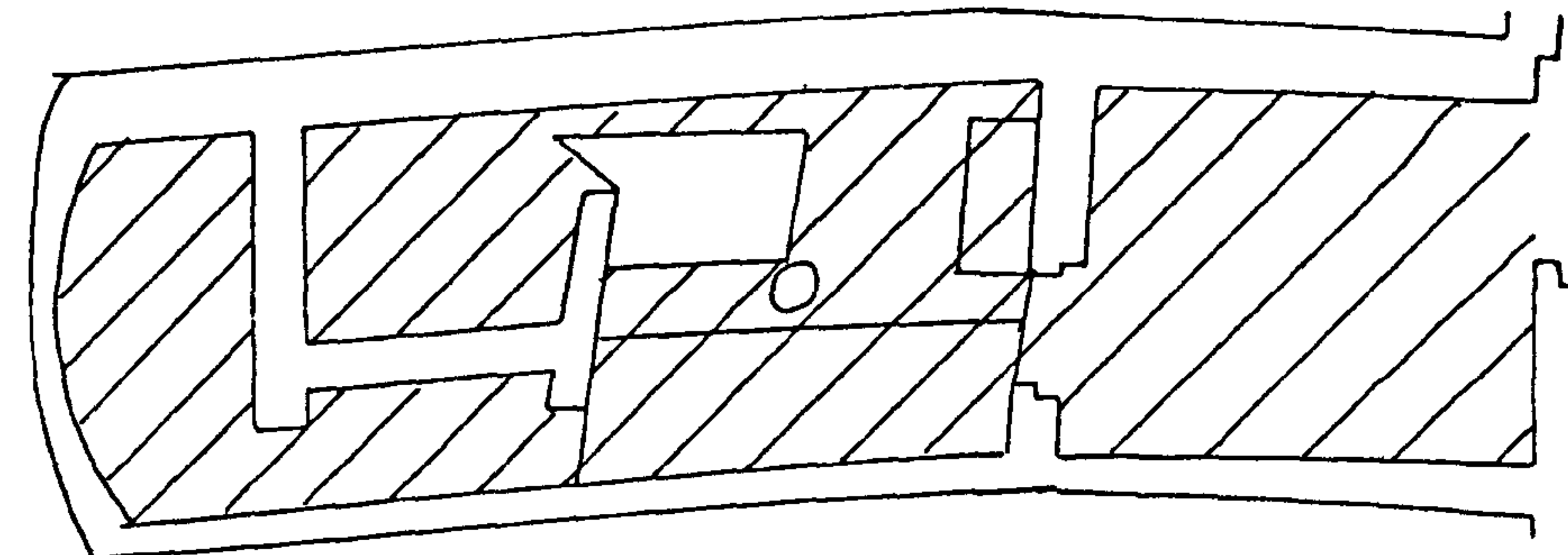
Midwinter



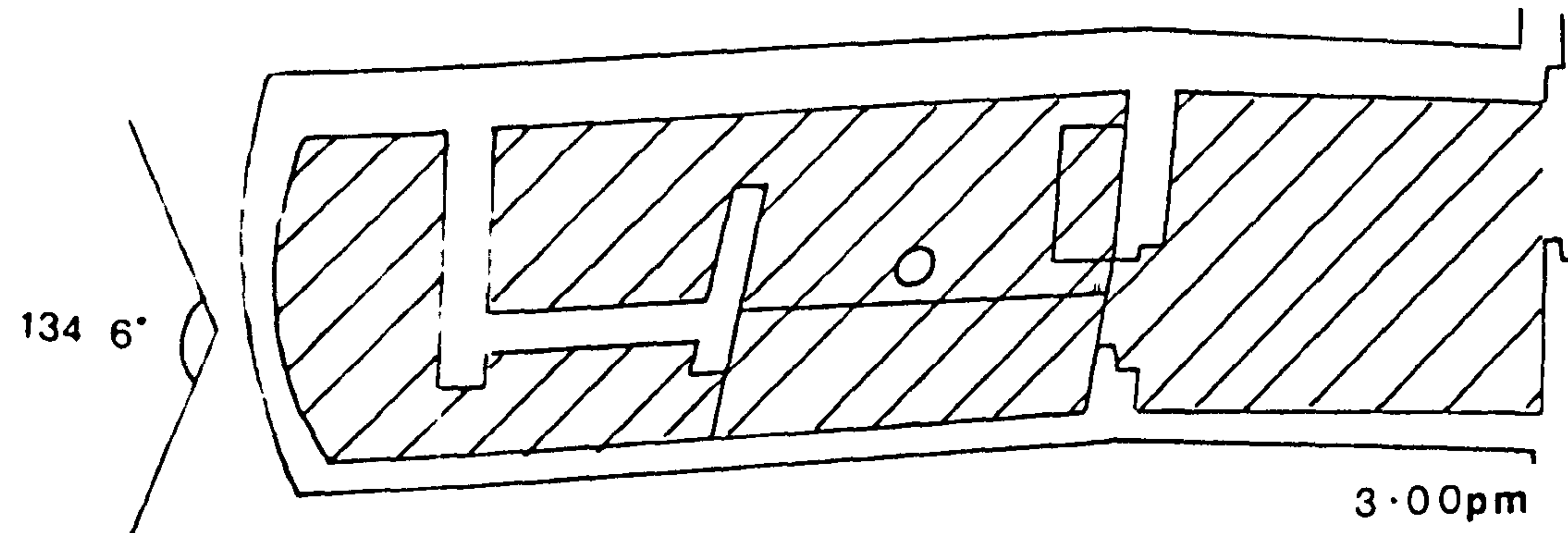
12:00 noon



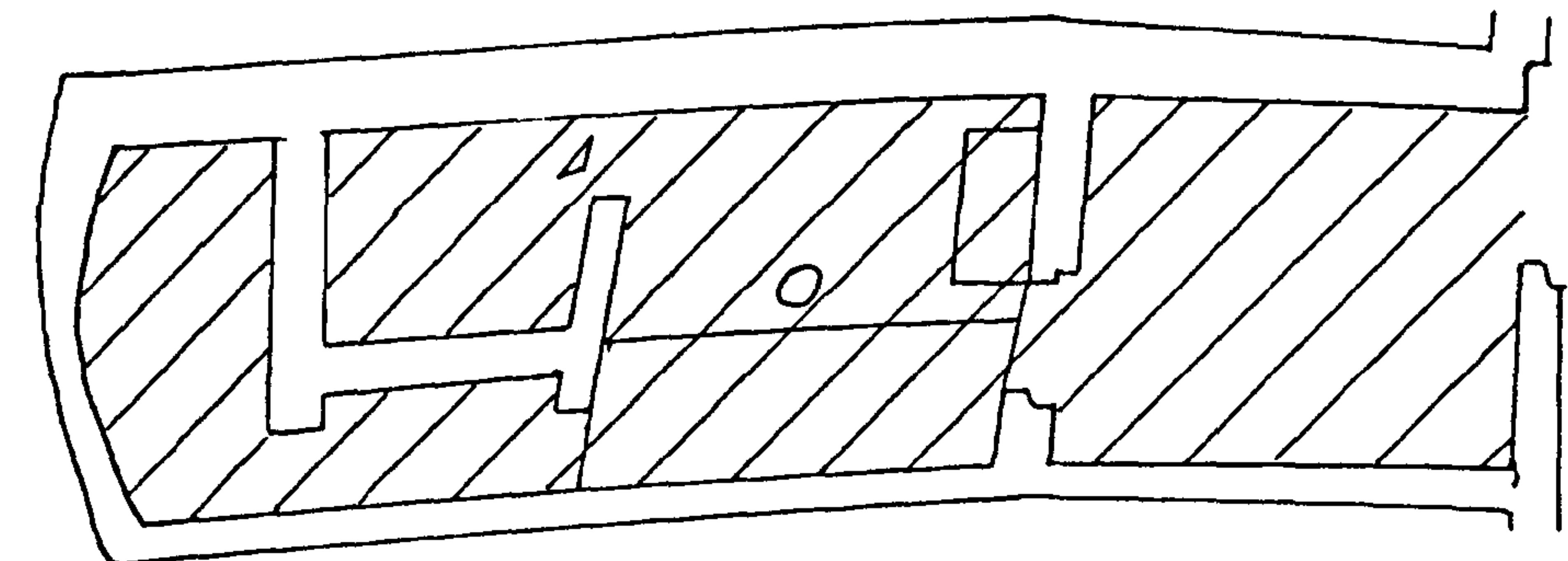
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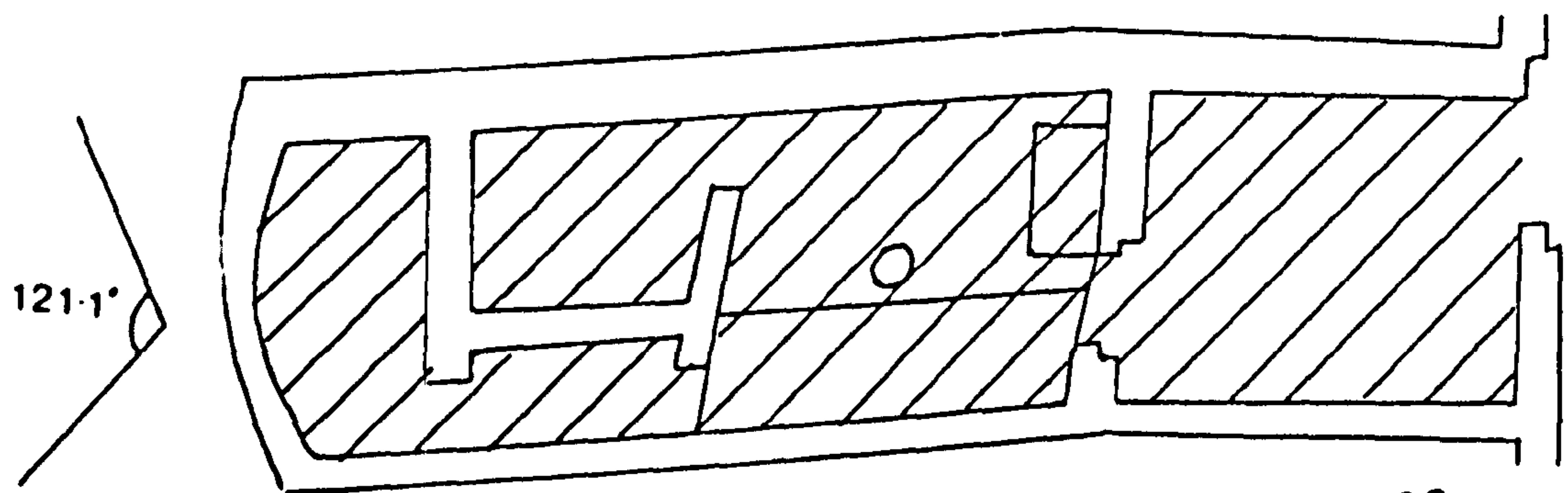
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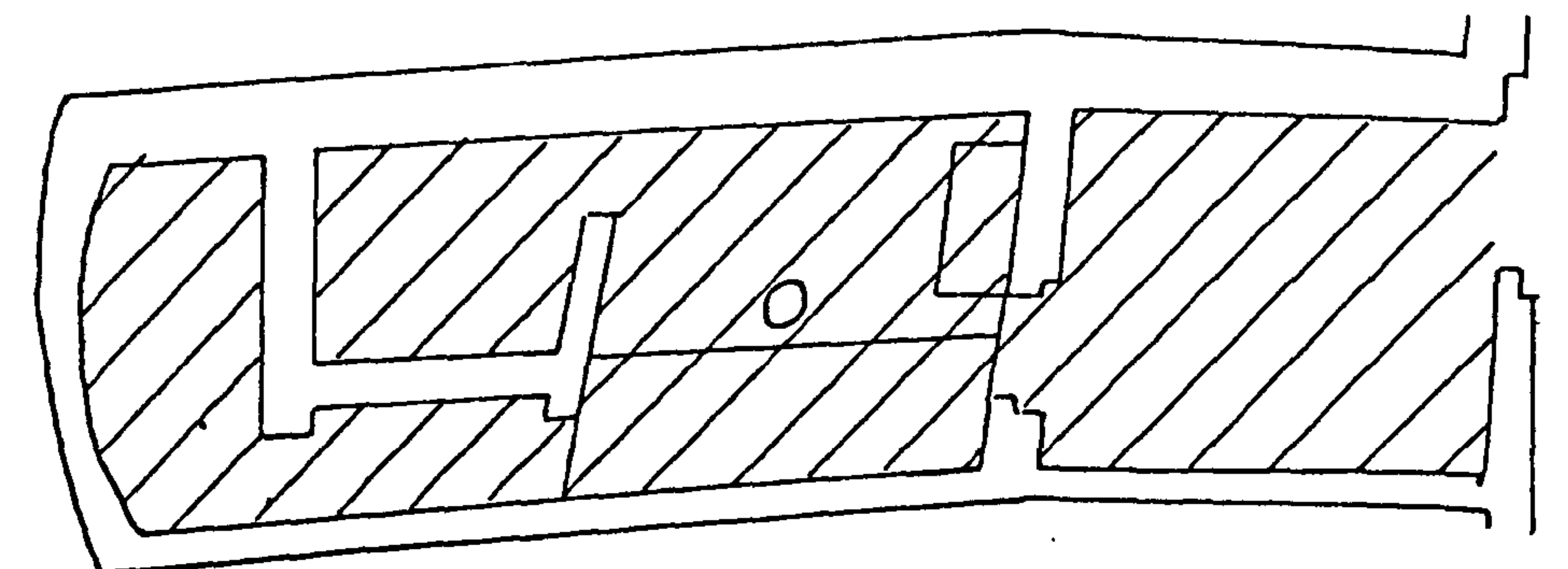
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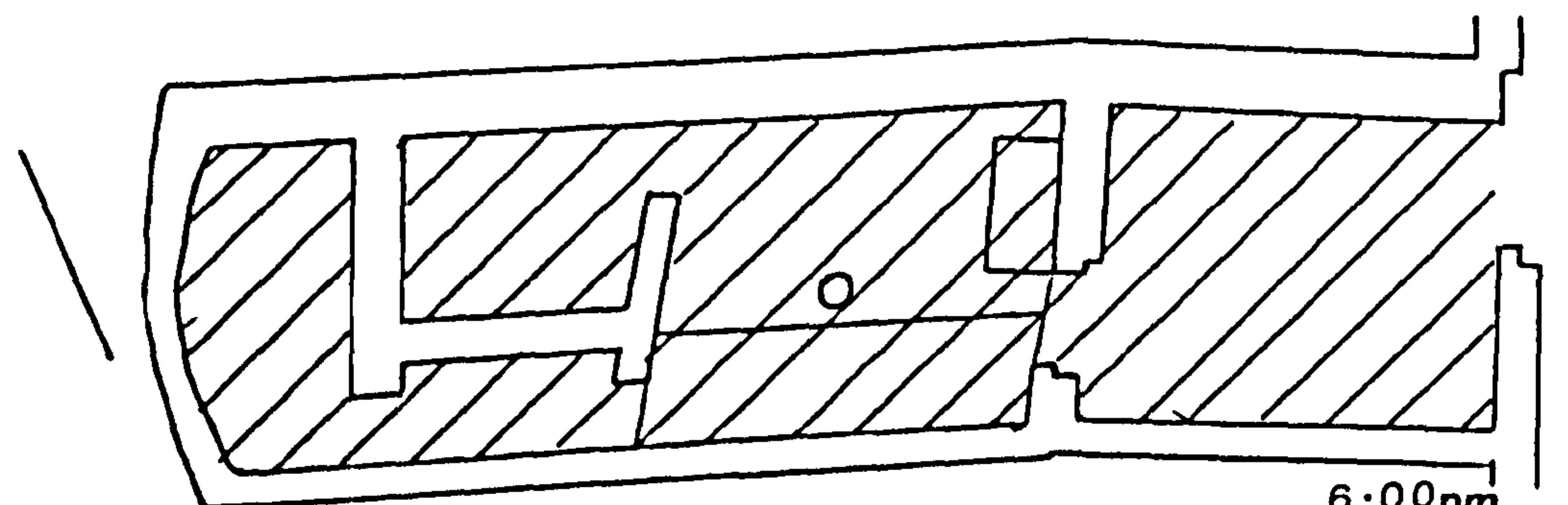
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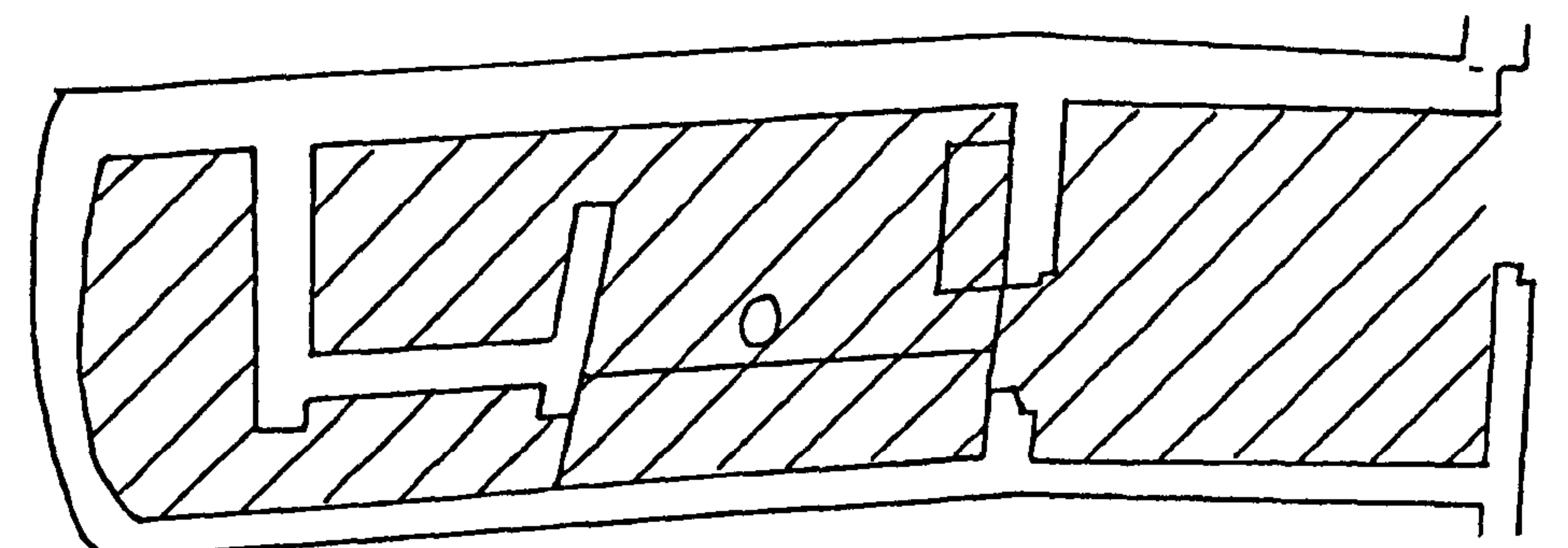
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ABBREVIATIONS

AA	Archäologischer Anzeiger. Berlin.
ASAE	Annales du Service des Antiquités de l'Égypte. Le Caire.
BIFAO	Bulletin de l'institut français d'archéologie orientale. Le Caire.
C d'E	Chronique d'Égypte. Bruxelles.
JDAI	Jahrbuch des Deutschen Archäologischen Instituts. Berlin.
JESHO	Journal of the Economic and Social History of the Orient. Leiden.
MDAIK	Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo. Kairo.
OIC	Oriental Institute Communications. Chicago.
RdE	Revue d'Égyptologie. Paris.
ZAS	Zeitschrift für Ägyptische Sprache und Altertumskunde. Berlin.

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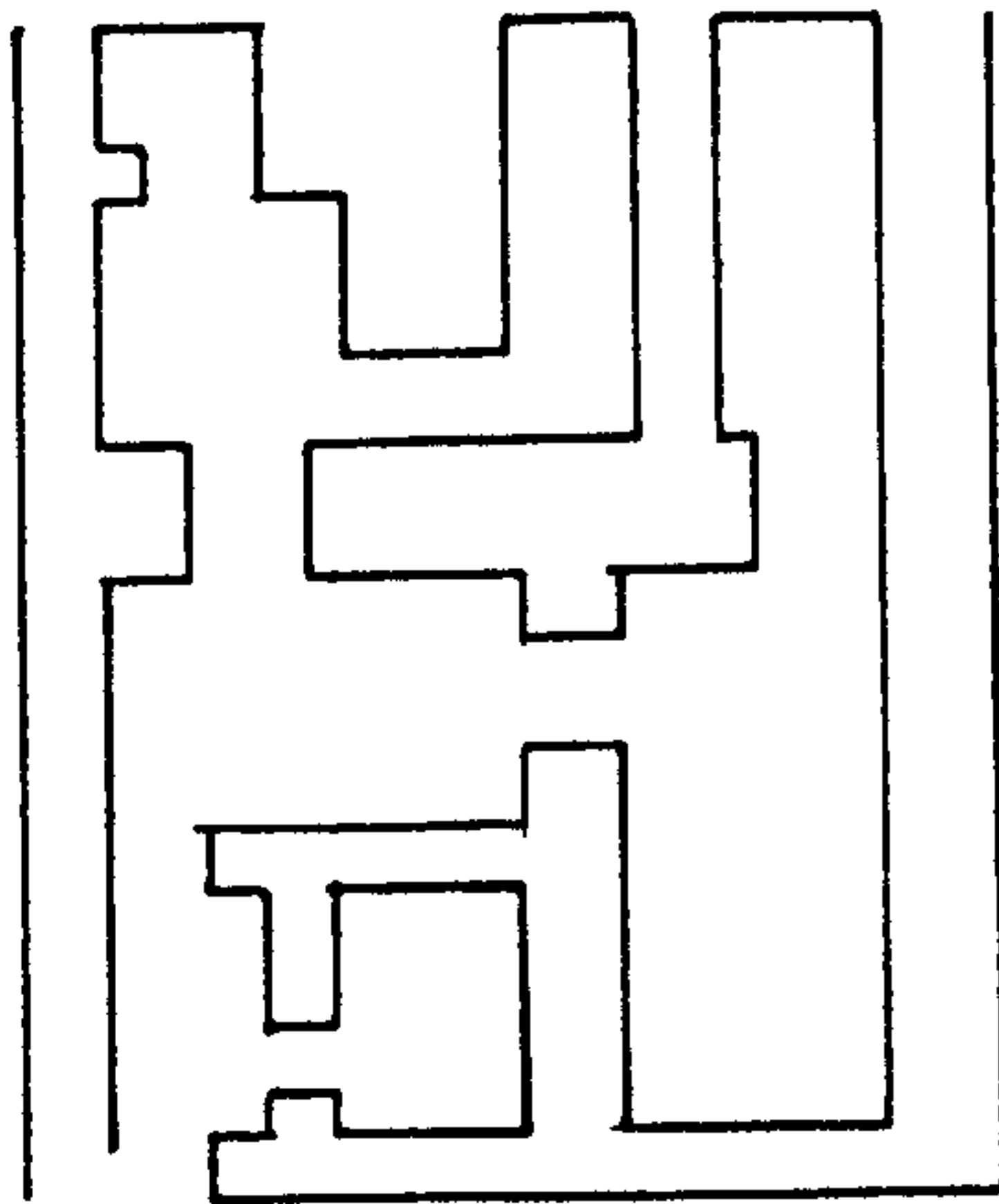
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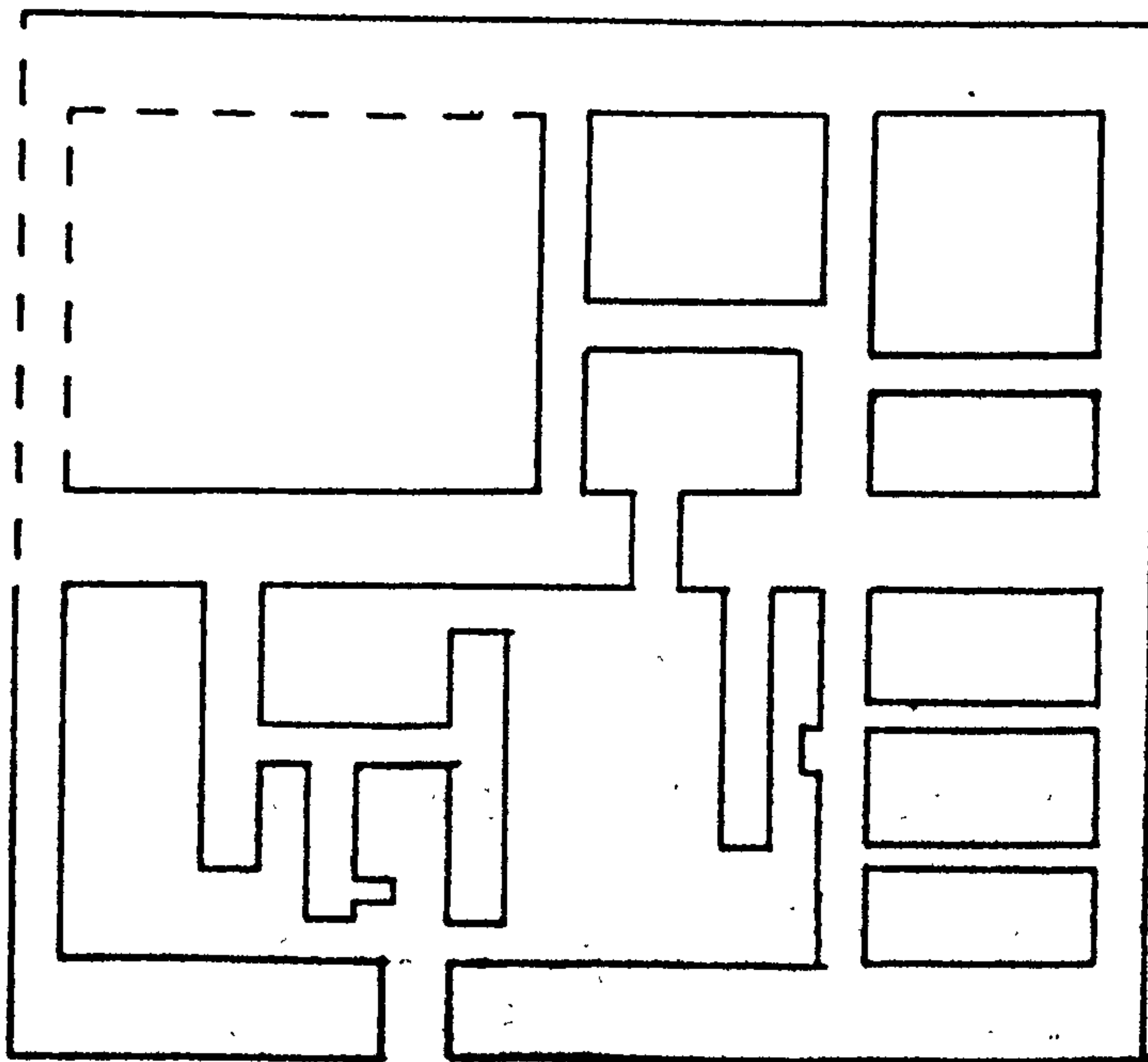
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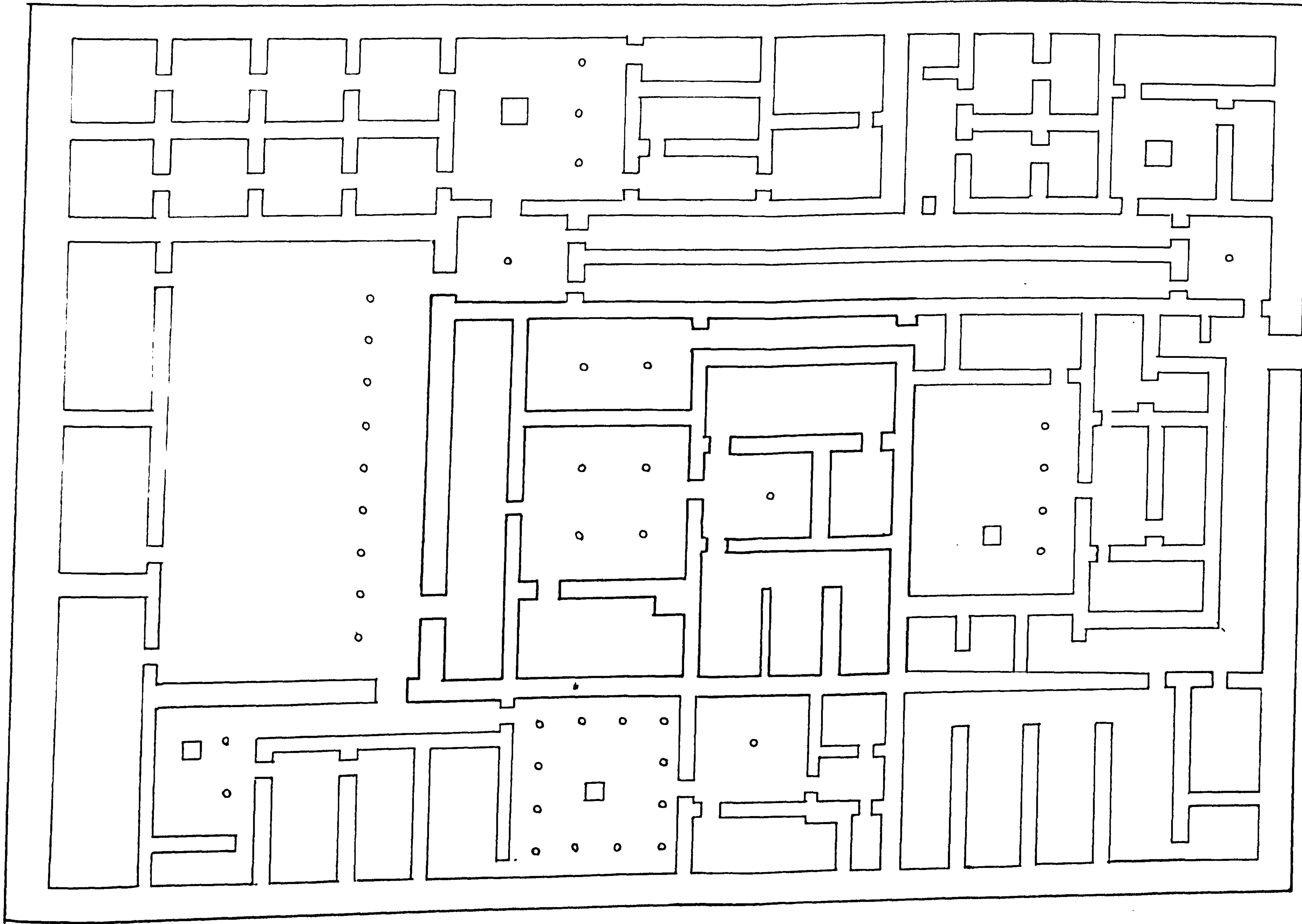
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Plan I. A typical workman's house from Kahun. (1:200)



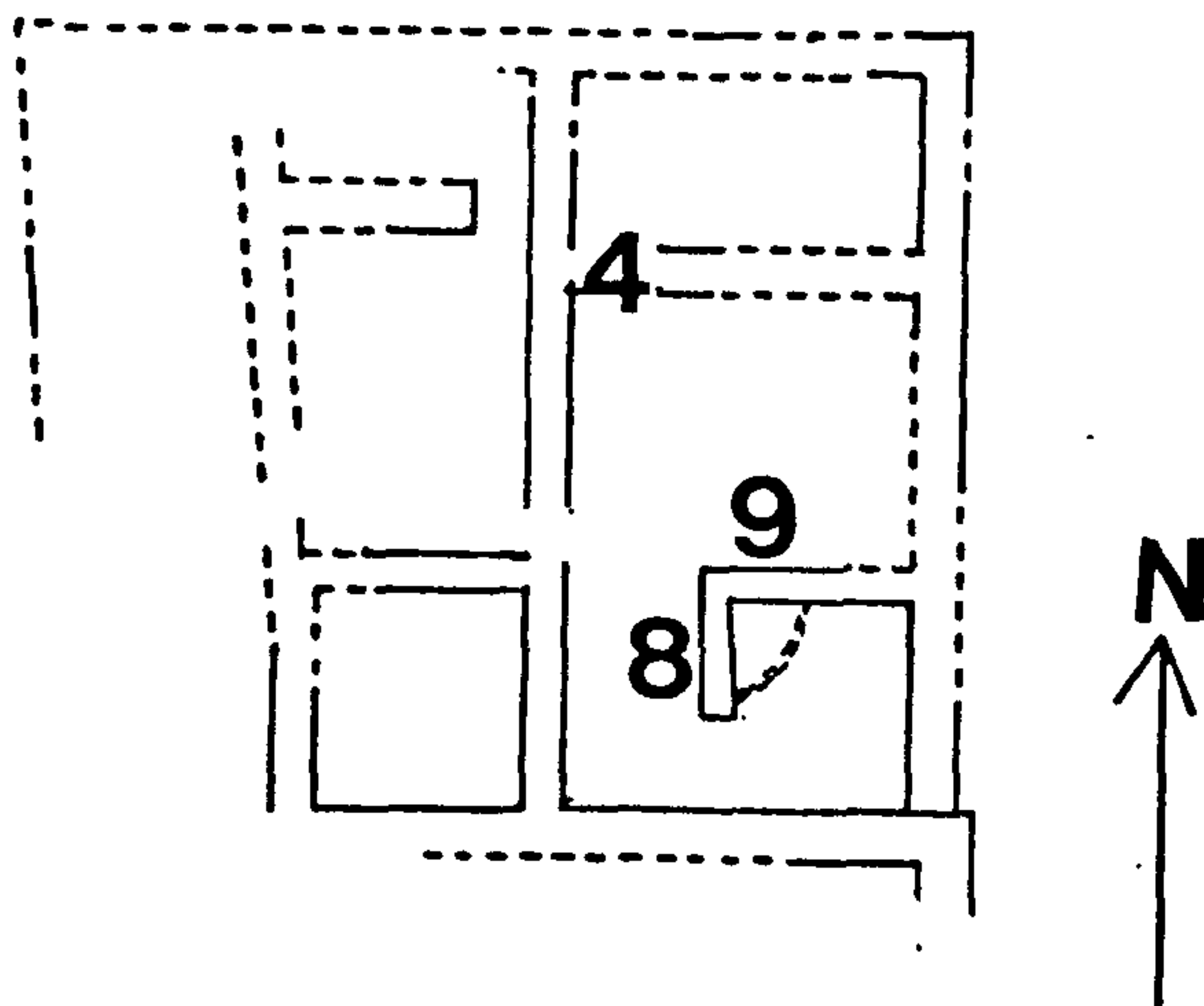
Plan II. A larger complex at 'Kahun'. (1:200)



N ←

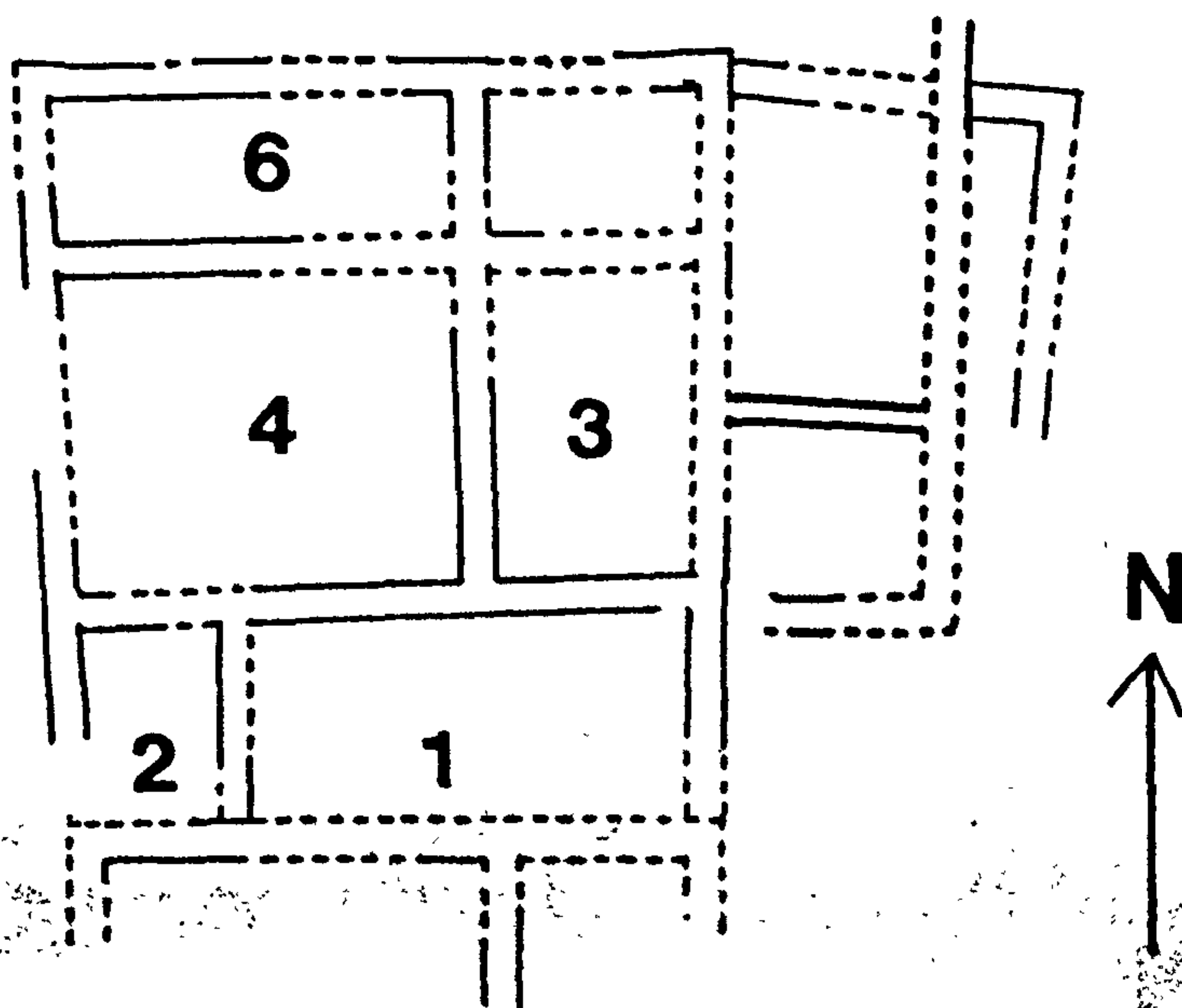
Plan III. The mansion on the north side of the street at 'Kahun'. (1:200)

BUILDING C



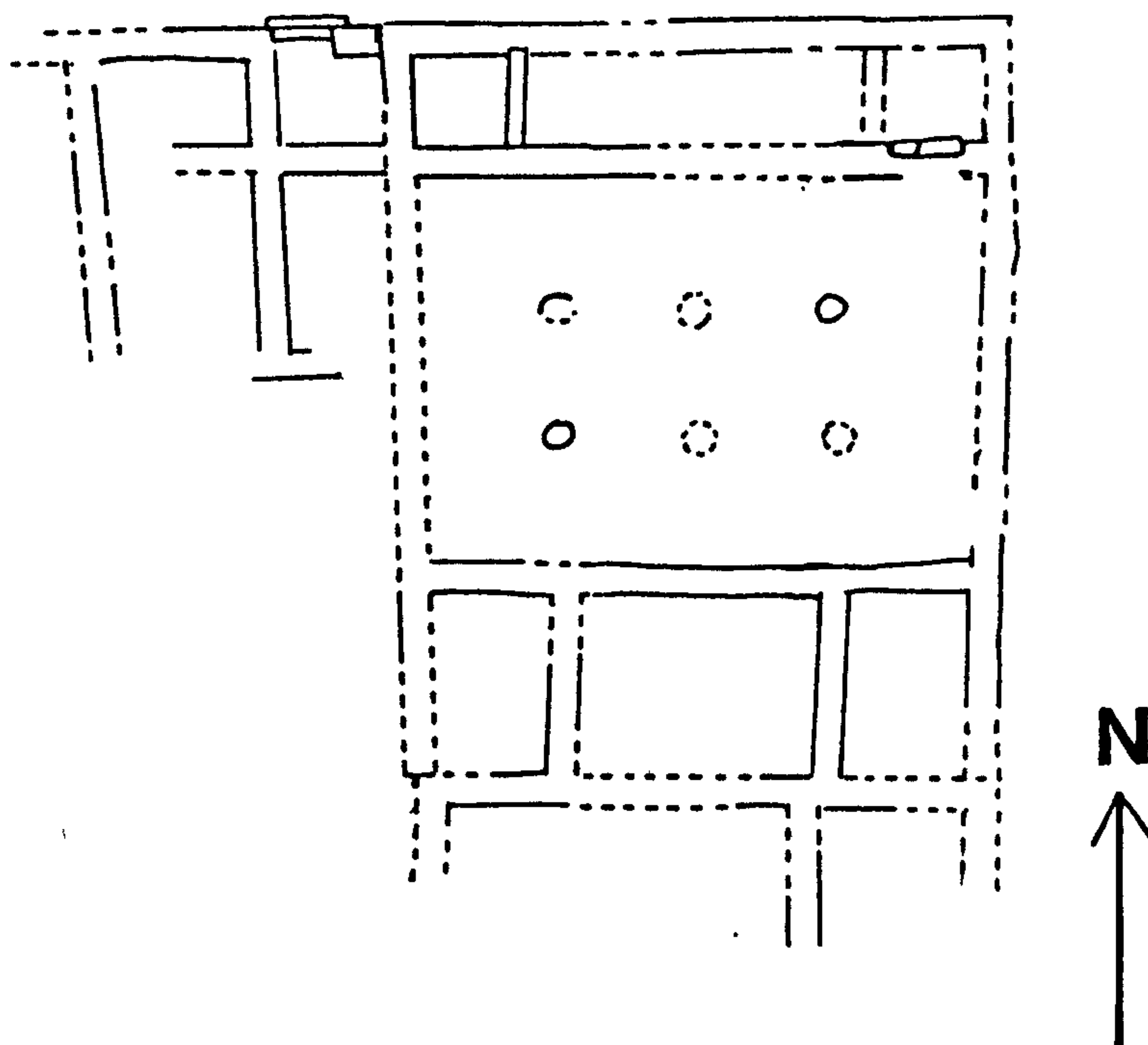
Plan IV. K44, Elephantine Island. Stage I. (1:200)

BUILDING D



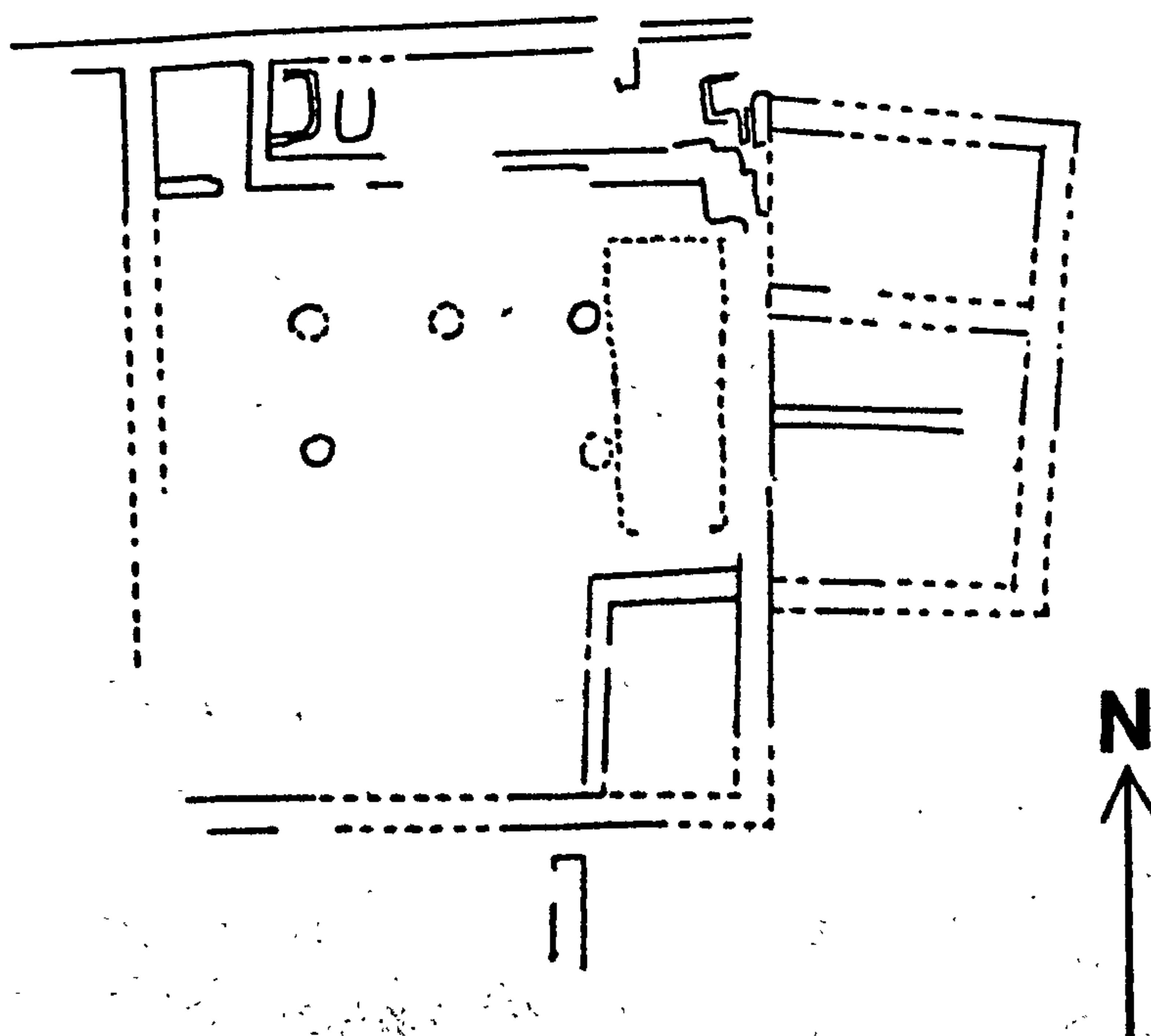
Plan V. K44, Elephantine Island. Stage II. (1:200)

K44 - VII REPORT

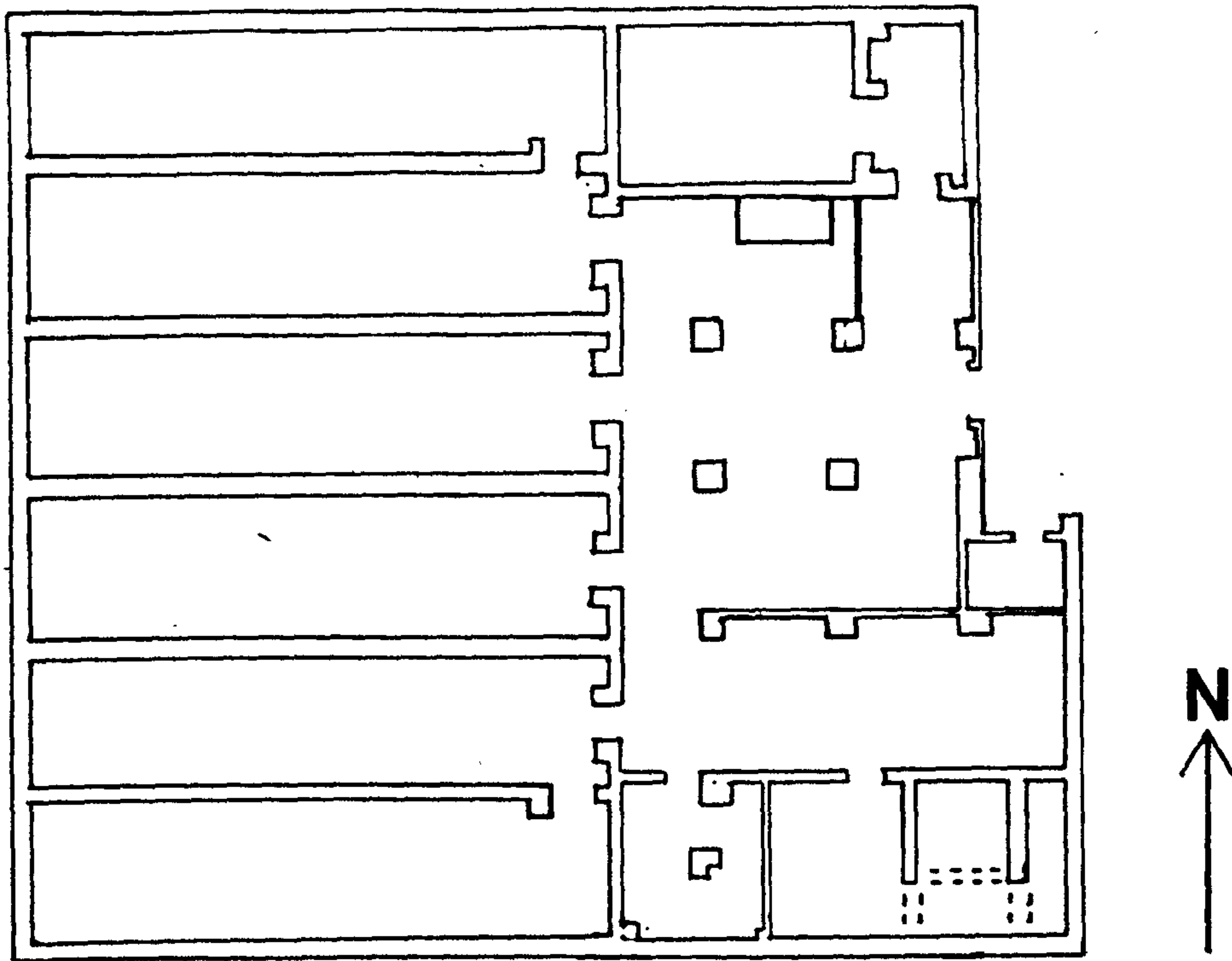


Plan VI. K44, Elephantine Island. Stage III. (1:200)

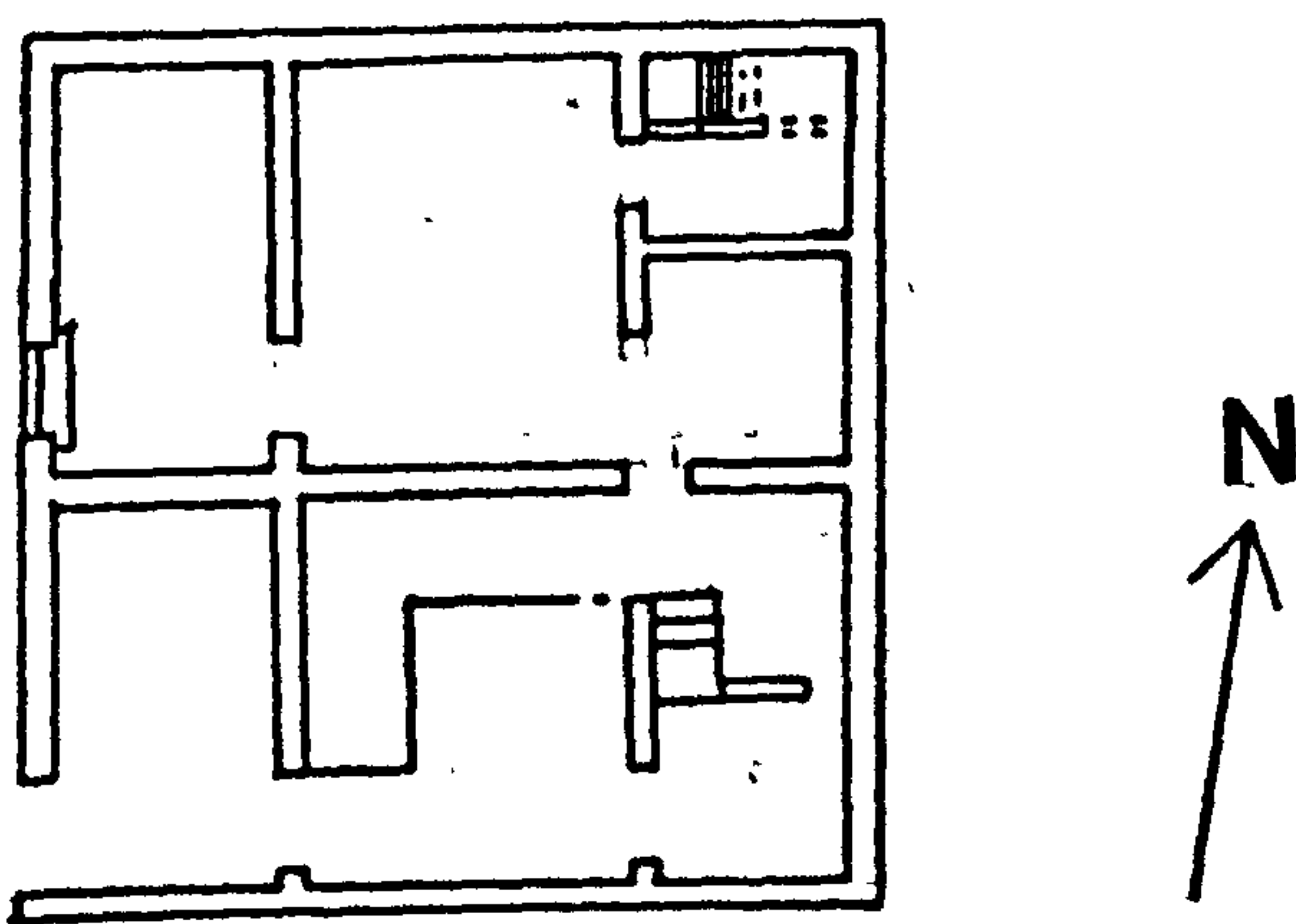
K44 - IV REPORT



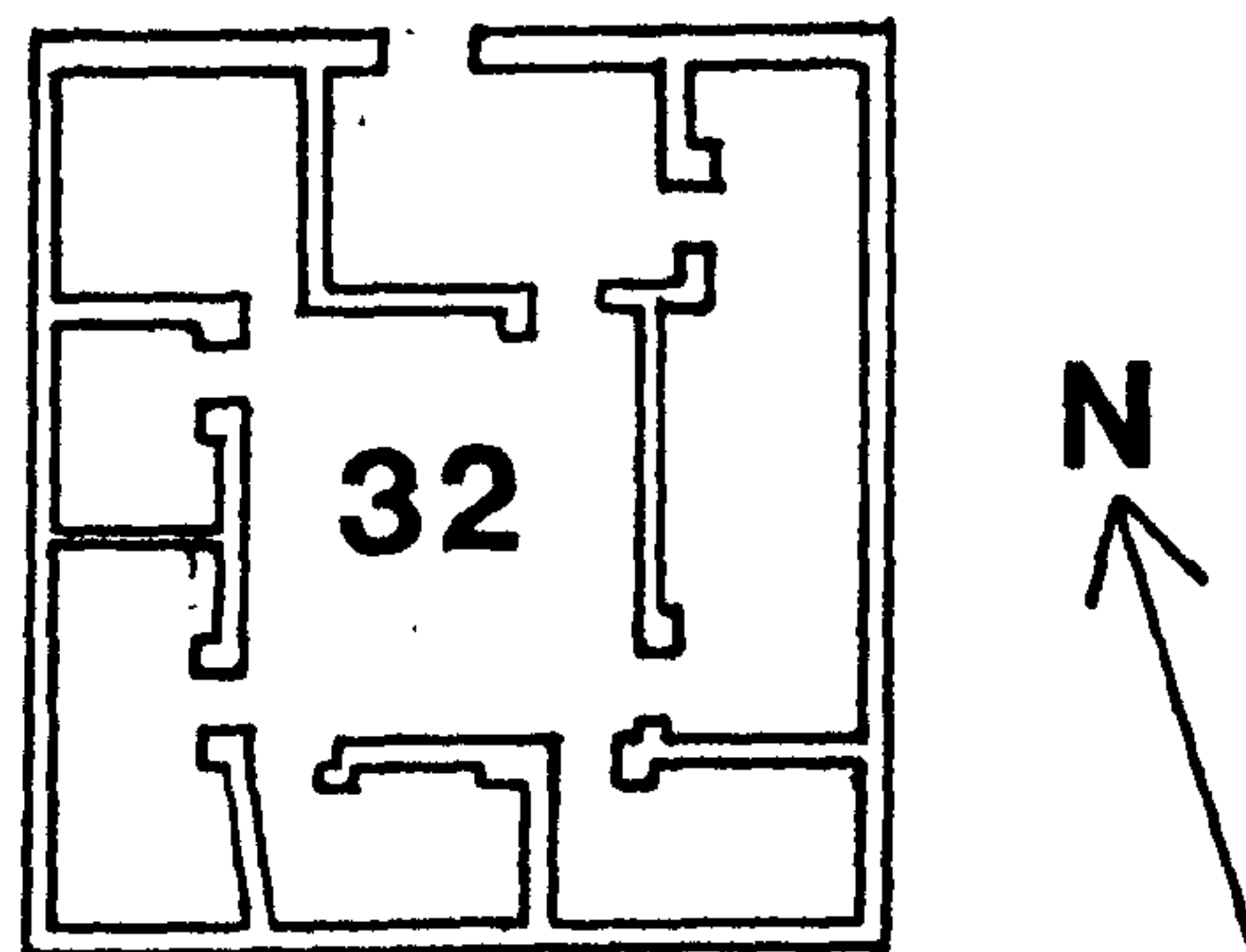
Plan VII. K44, Elephantine Island. Stage IV. (1:200)



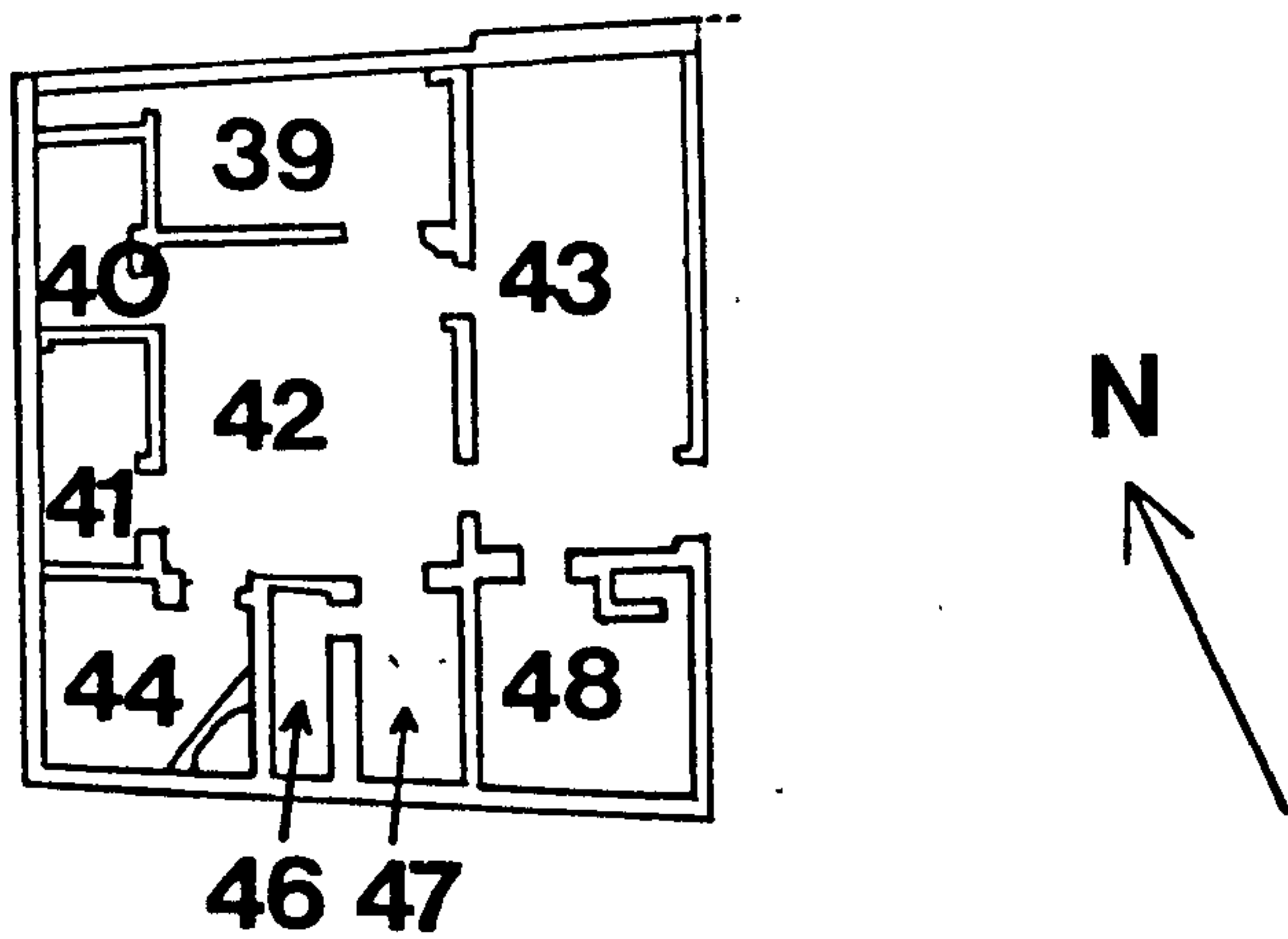
Plan VIII. The 'Tax building' at el-Amarna. (1:200)



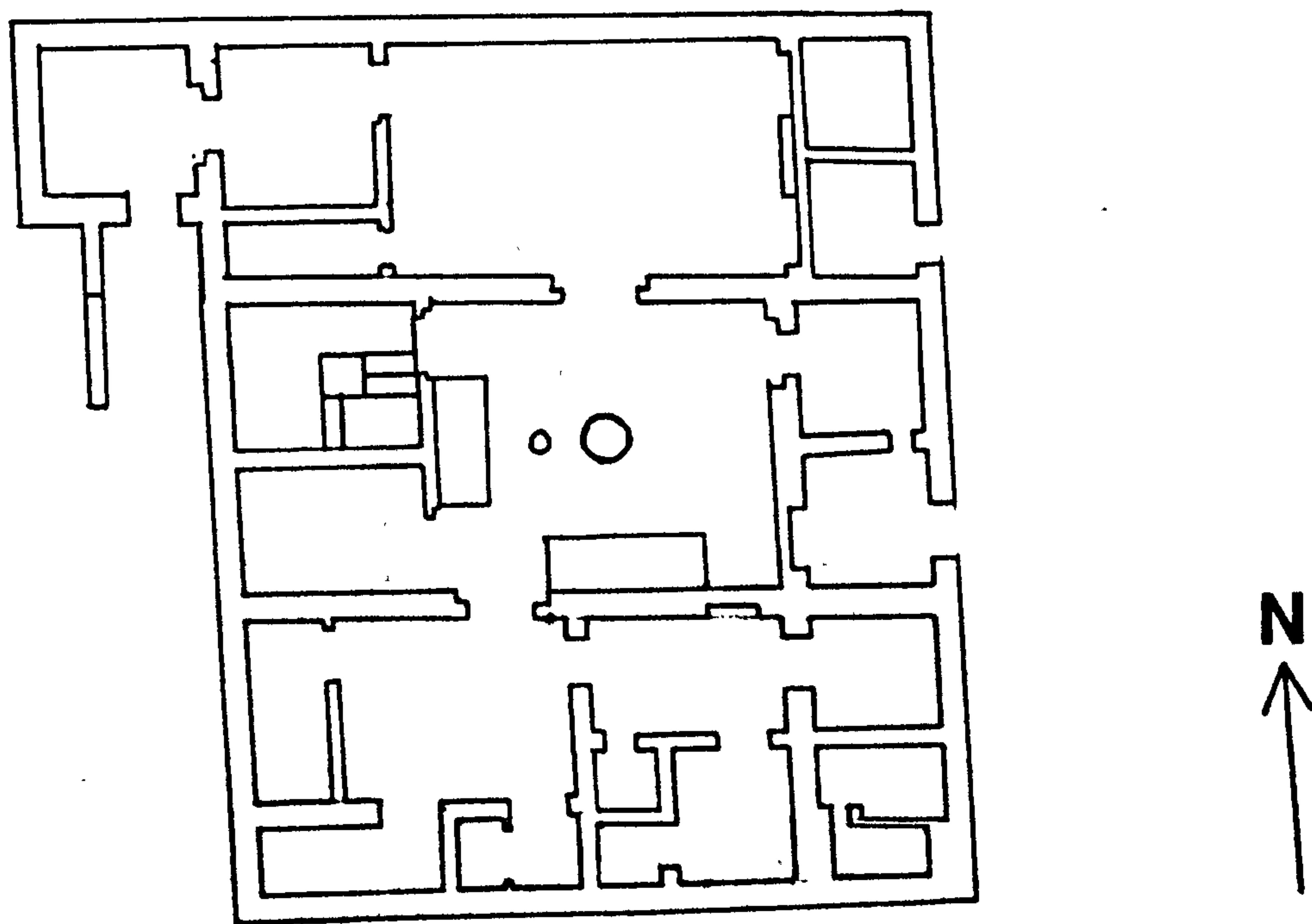
Plan IX. Houses from the workmen's village at el-Amarna. (1:200)



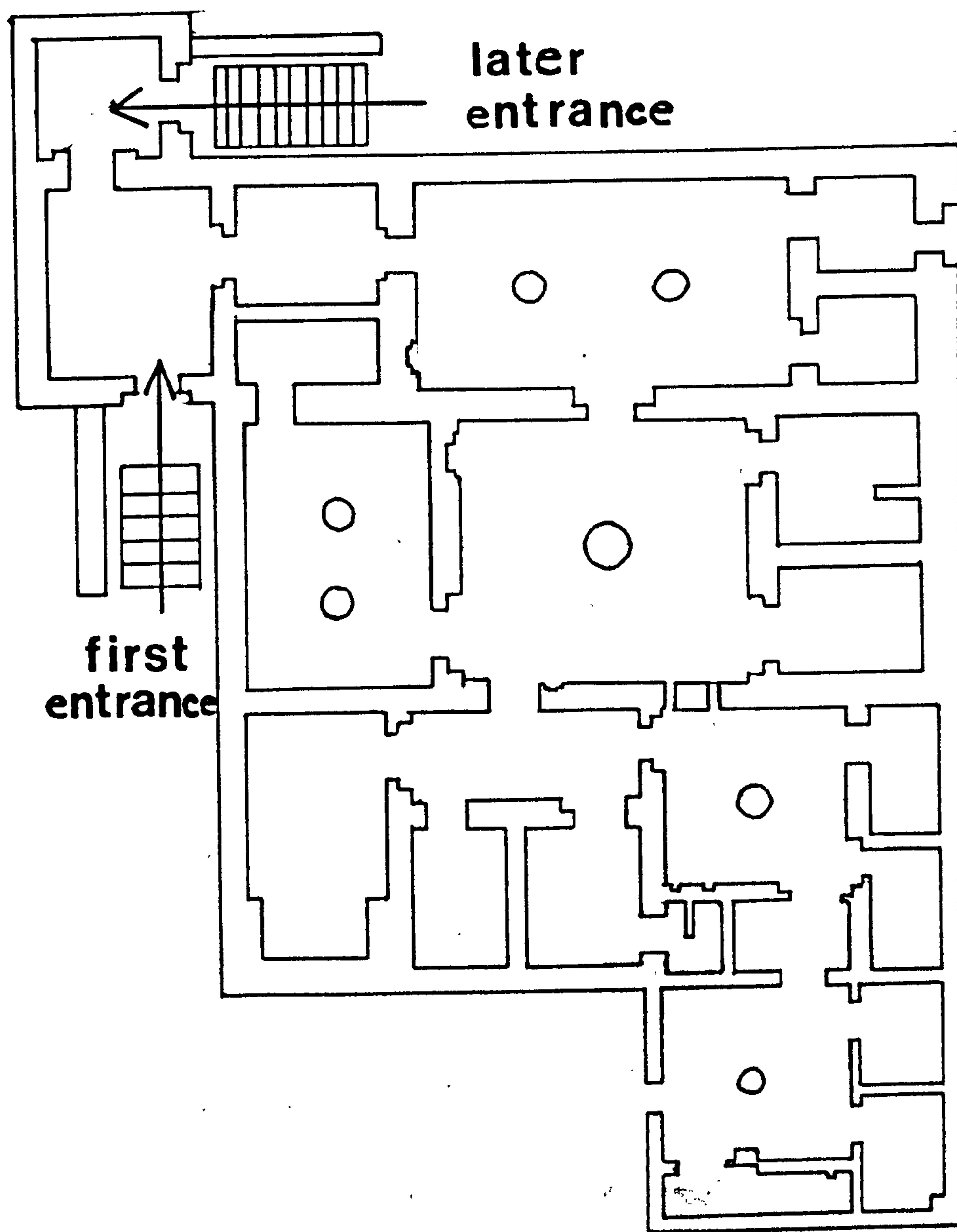
Plan X. A clerk's house at el-Amarna. (1:200)



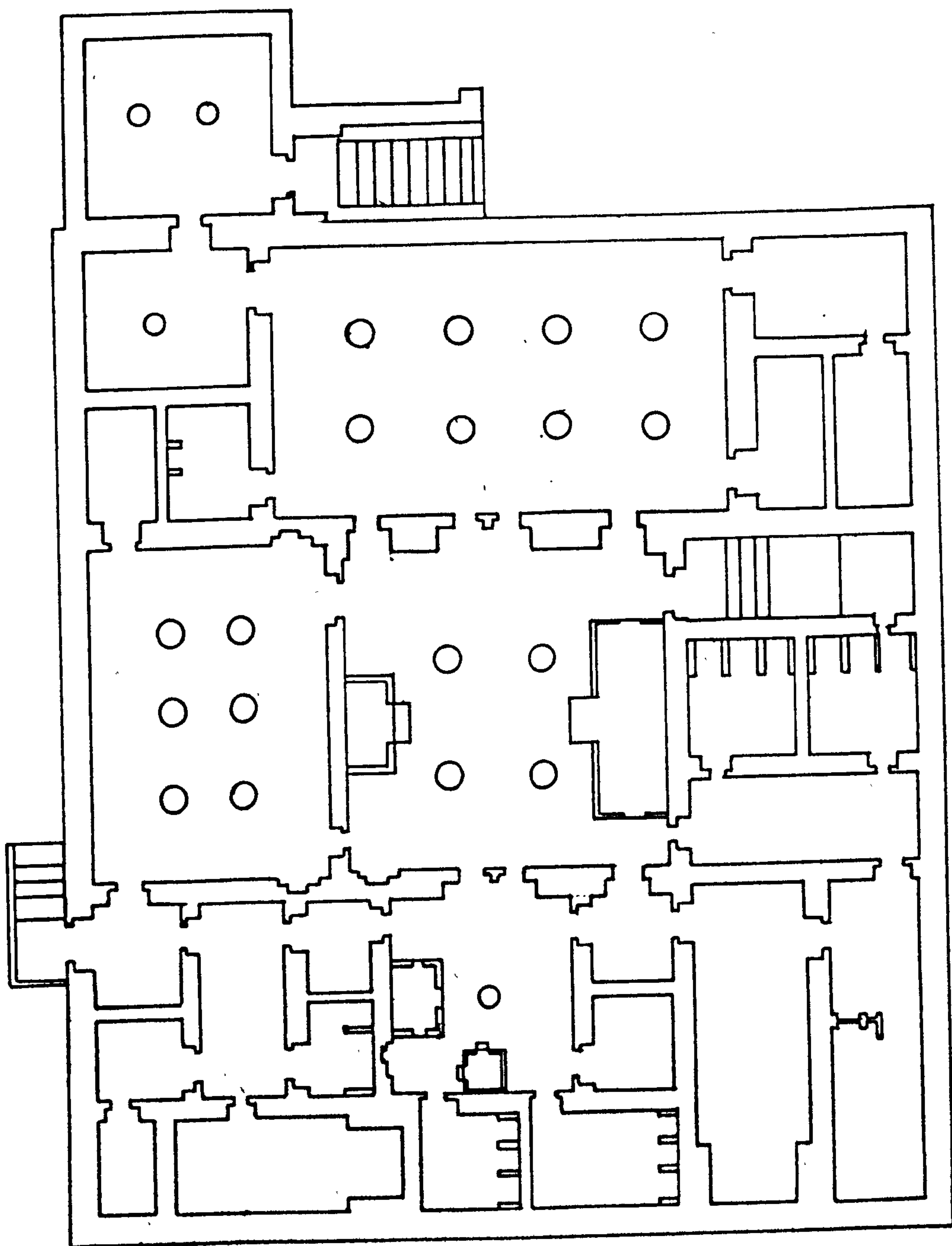
Plan XI. A small house at el-Amarna. (1:200)



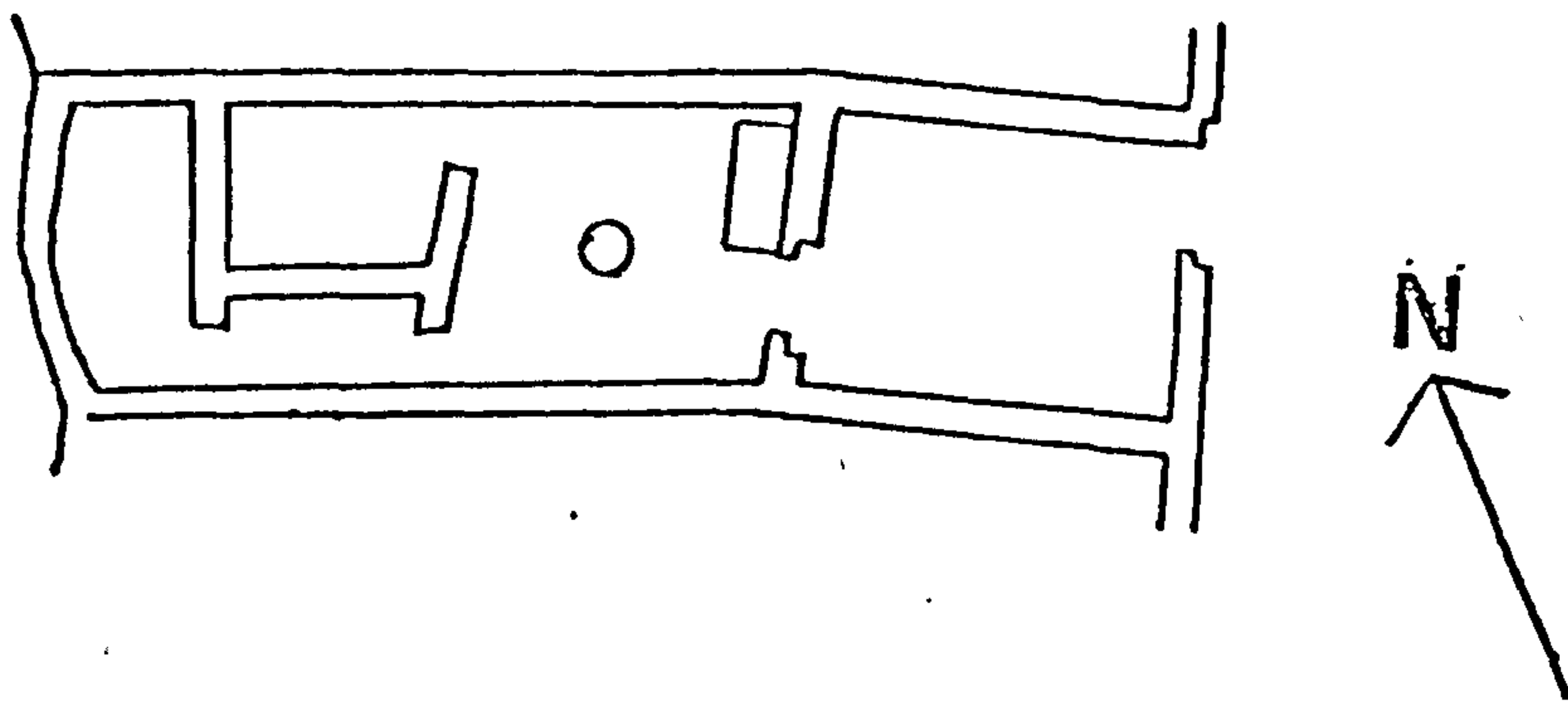
Plan XII. House T.35.9 at el-Amarna. (1:200).



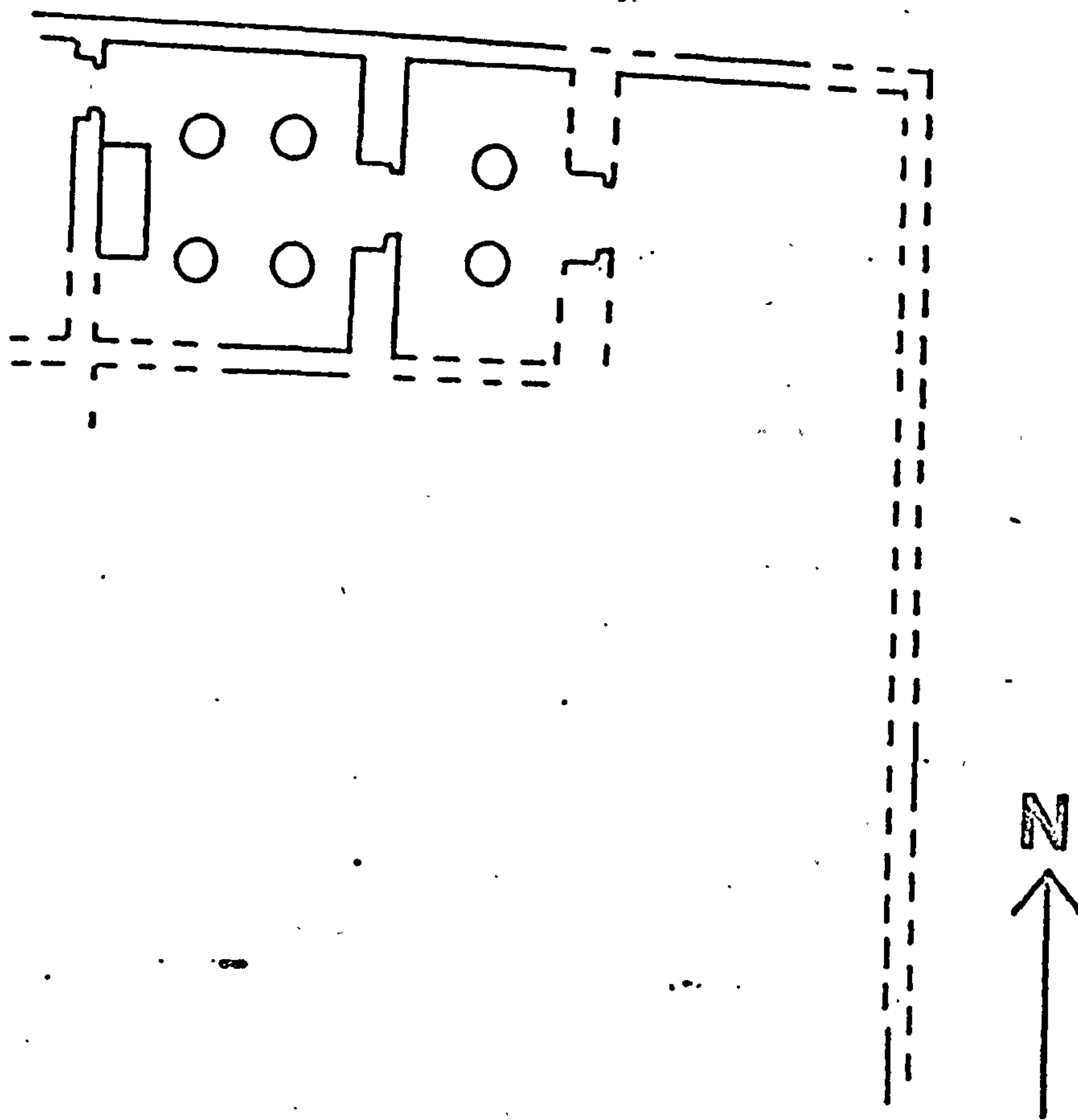
Plan XIII. House of Hatiay at el-Amarna, (T.34.1). (1:200)



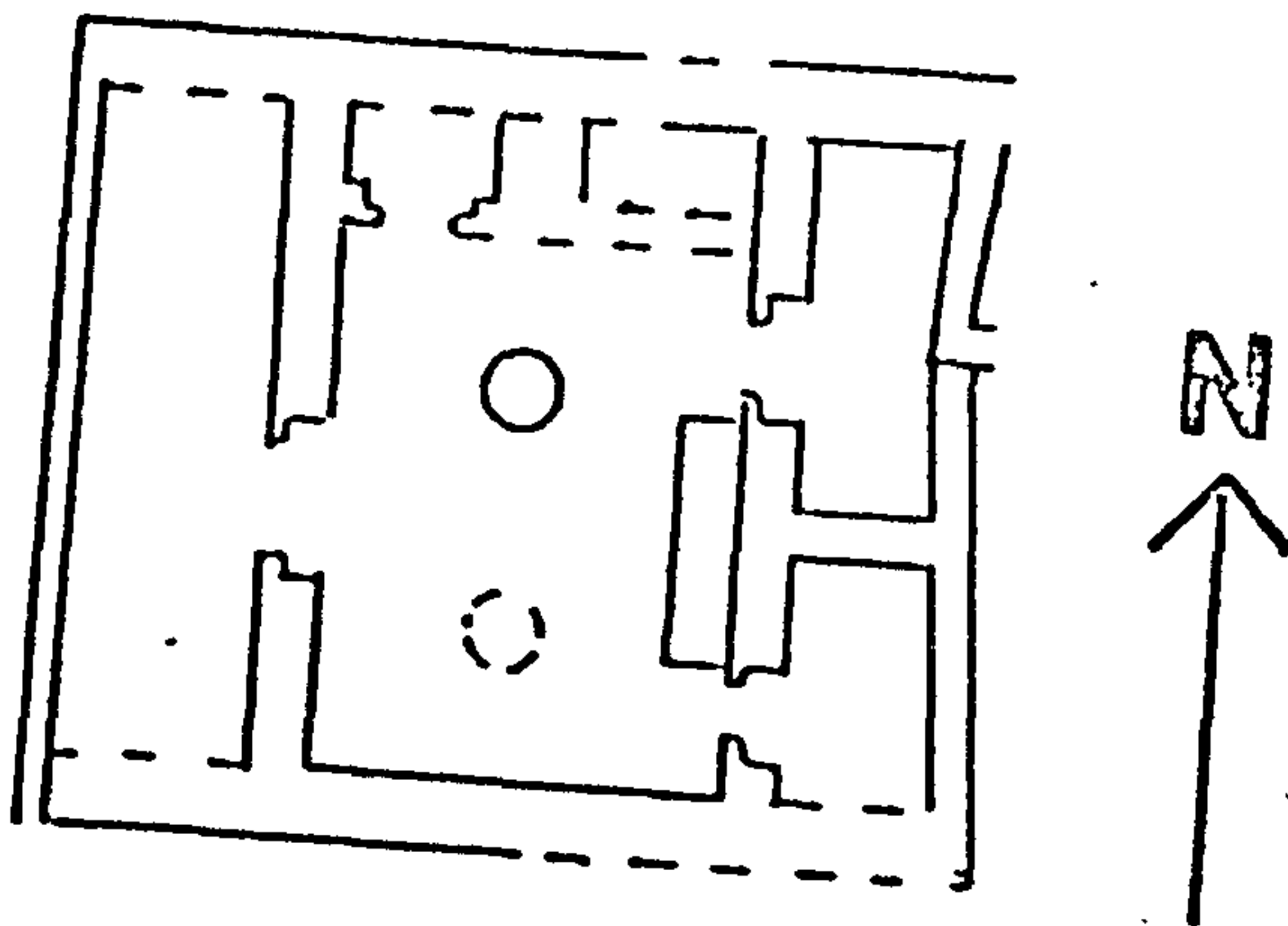
Plan XIV. House of Nakht at el-Amarna, (K.50.1). (1:200)



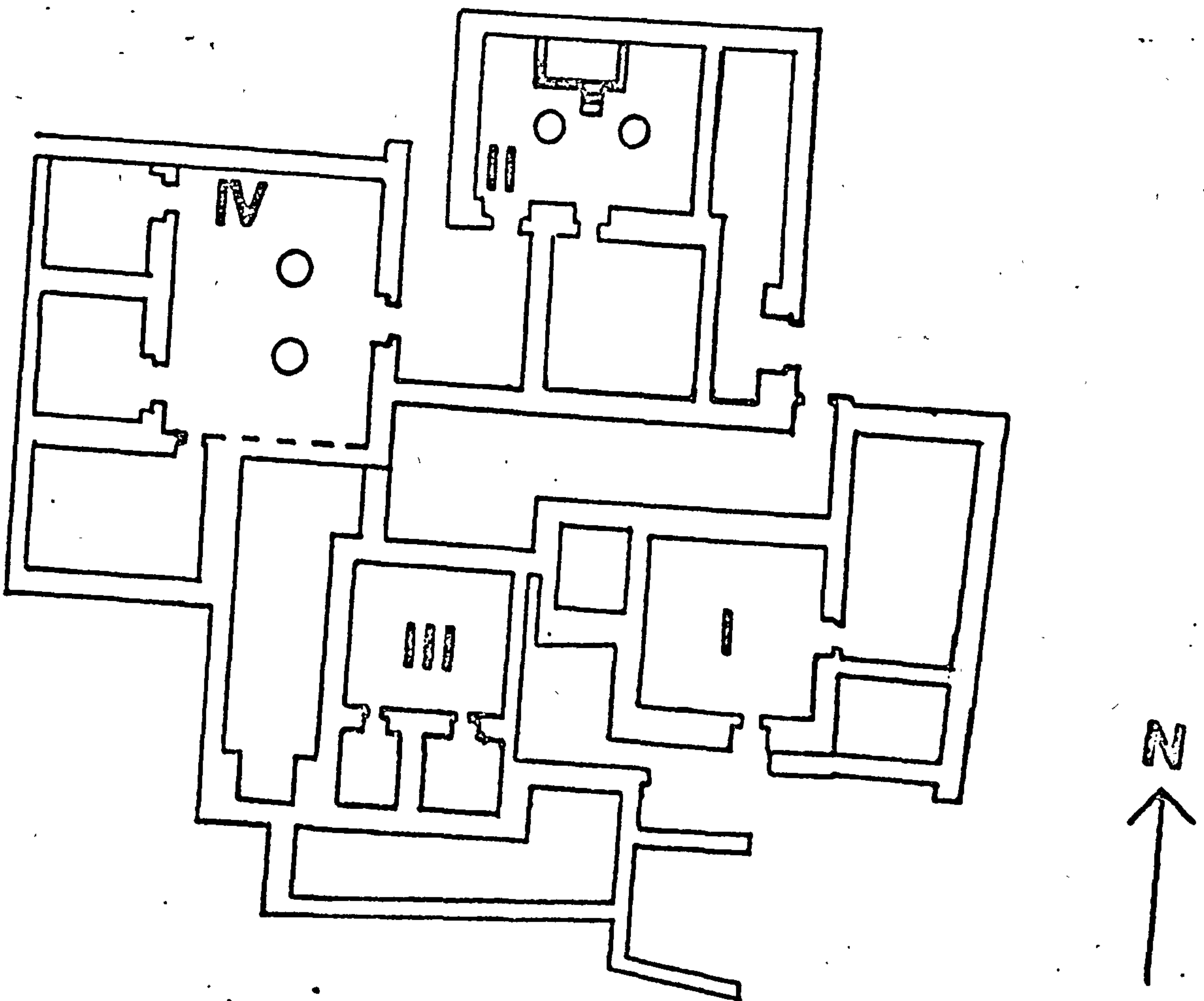
Plan XV. A typical house from Deir el-Medina. (1:200)



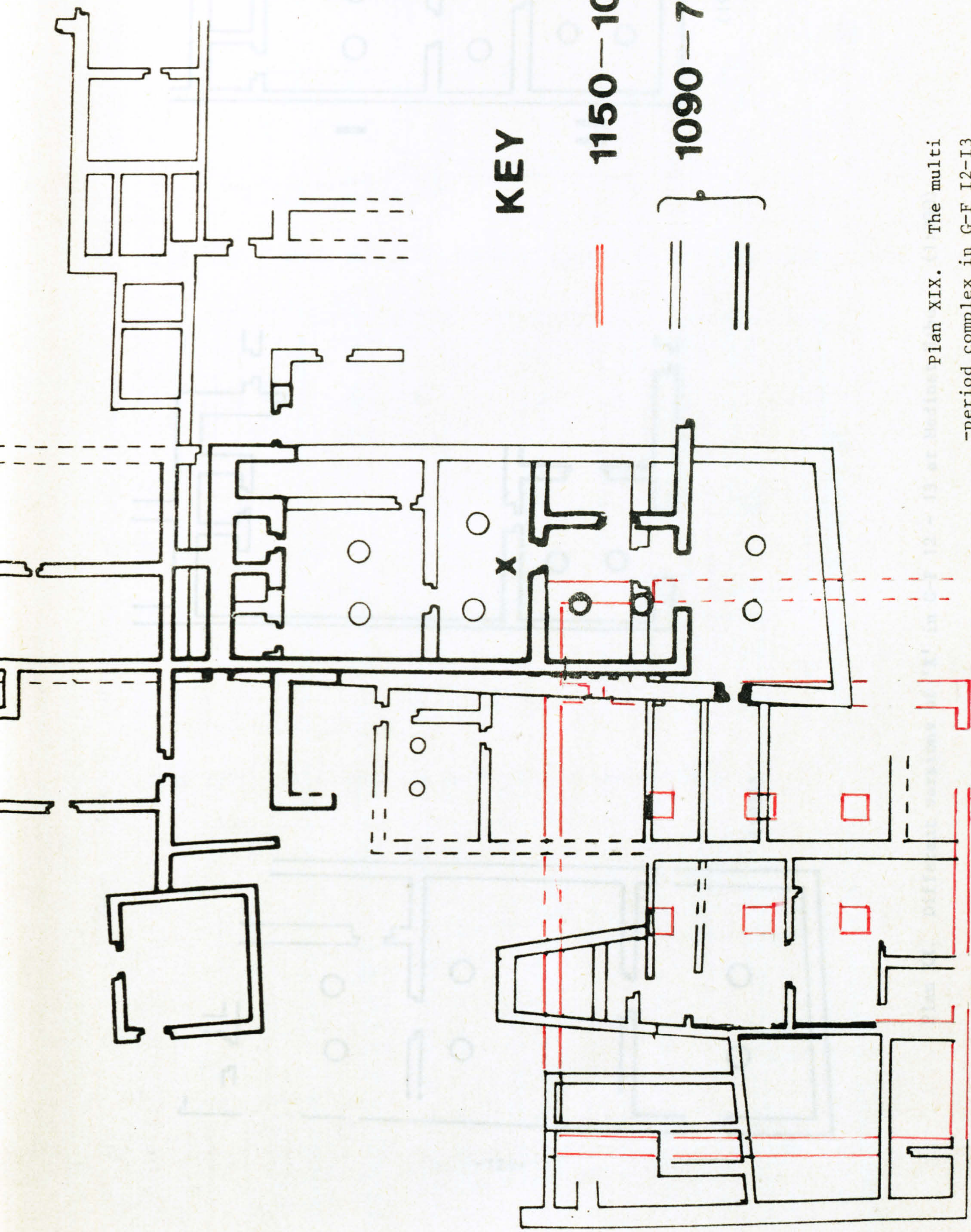
Plan XVI. The house of Butehamun at Medinet Habu. (1:200)



Plan XVII. Part of a house in F6 at Medinet Habu. (1:200)



Plan XVIII. A group of four houses in G6-7 at Medinet Habu. (1:200)

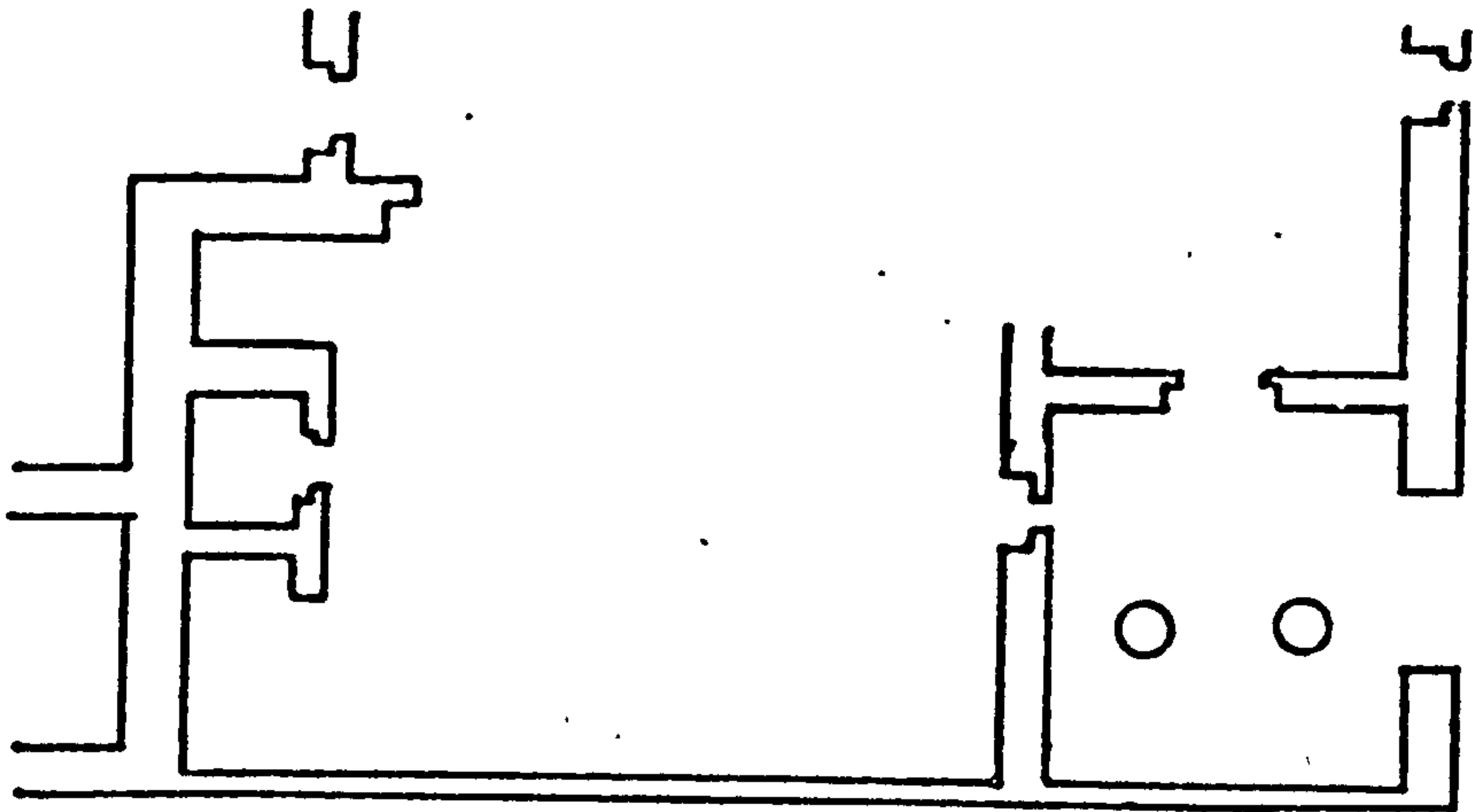


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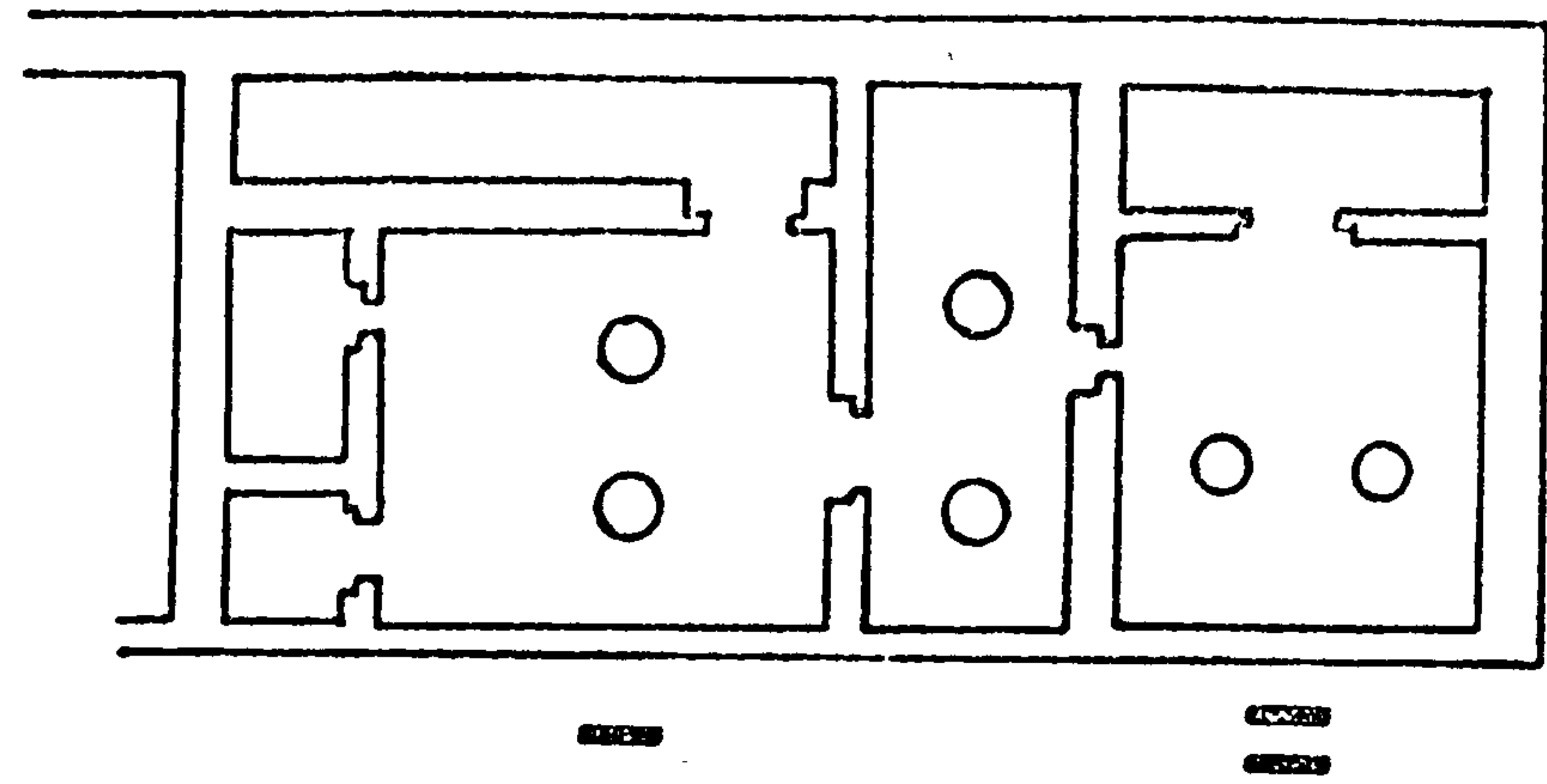
1150 — 1090 B.C.

1090 — 712 B.C.

Plan XIX. The multi-period complex in G-F I2-I3 at Medinet Habu.

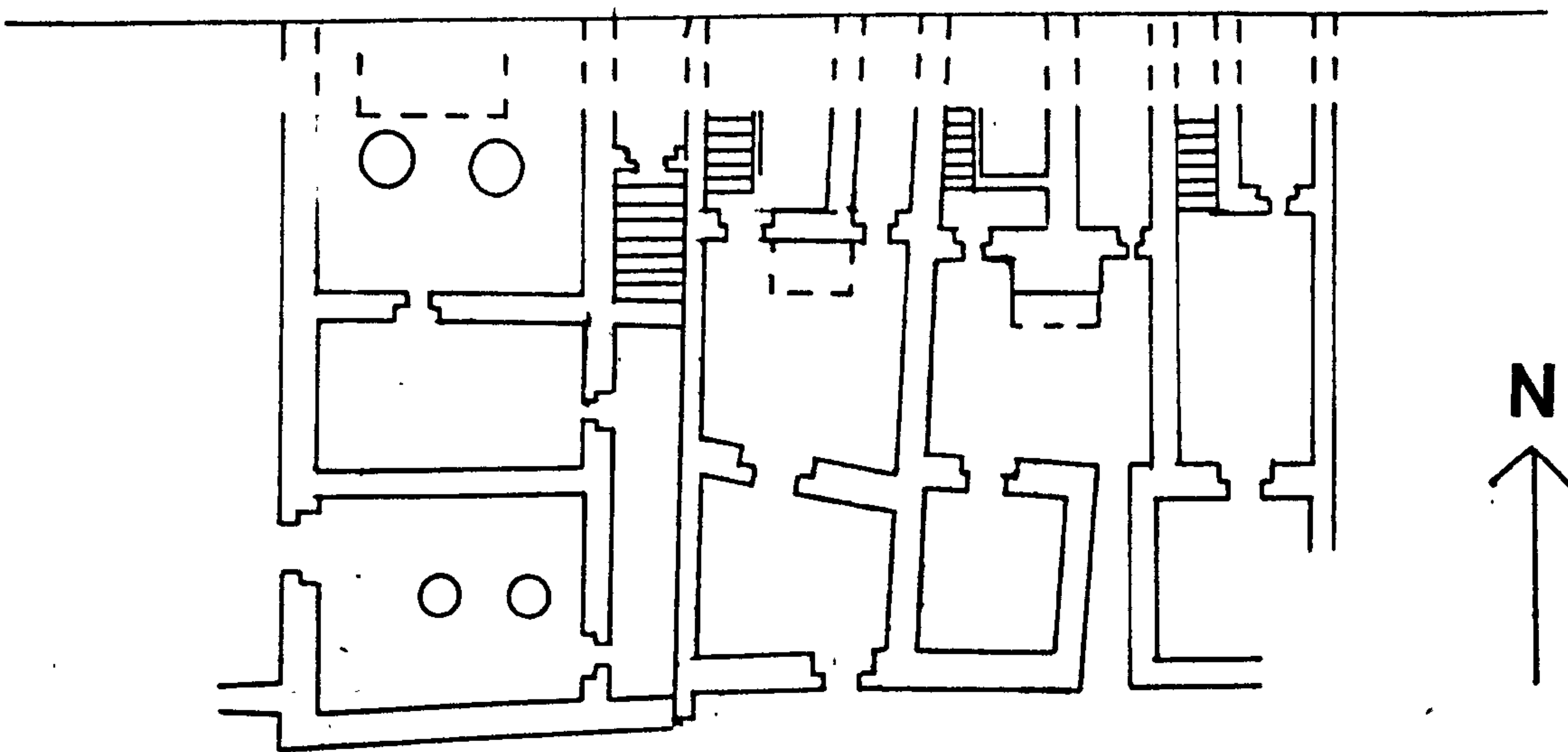


(1934)

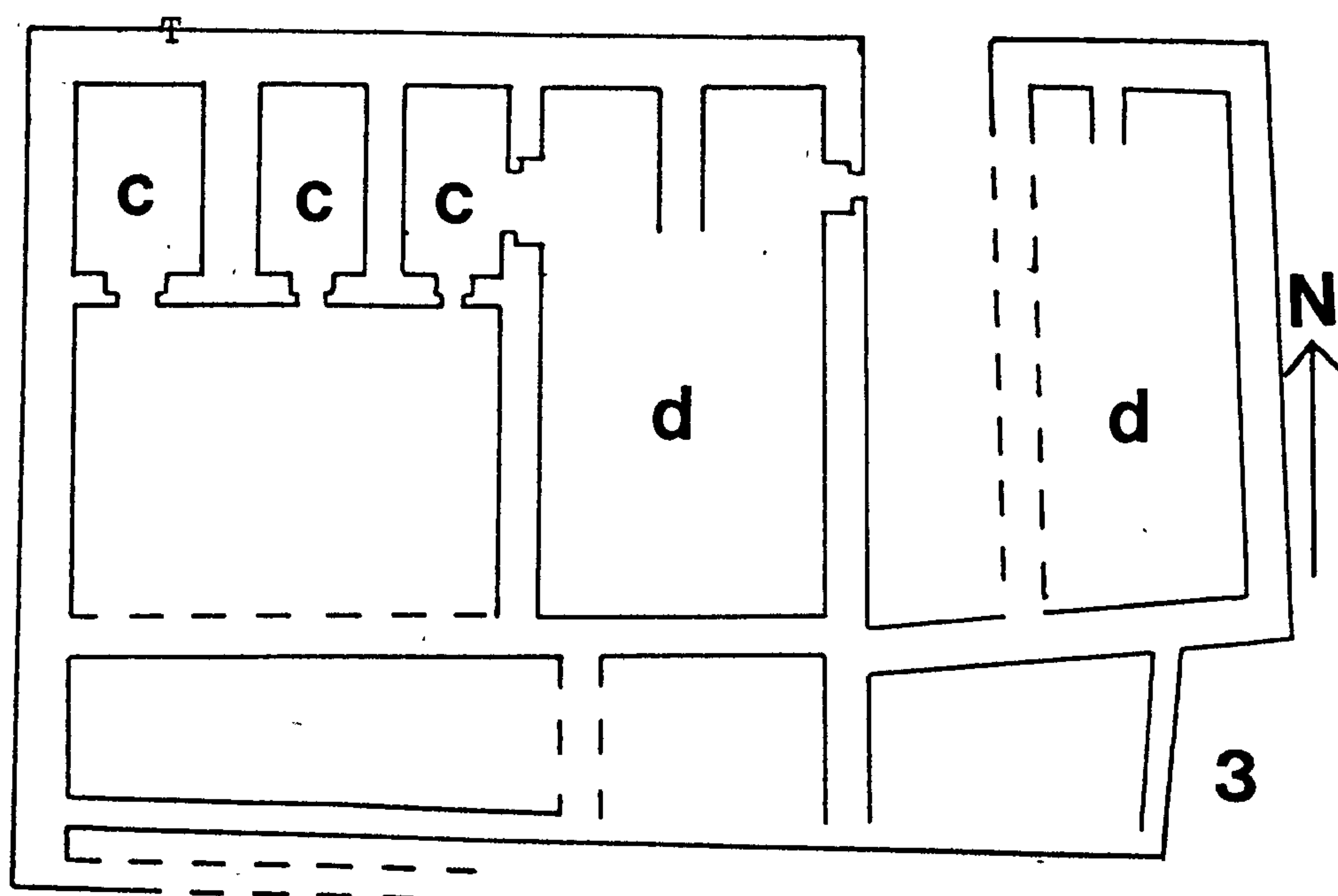


(1954)

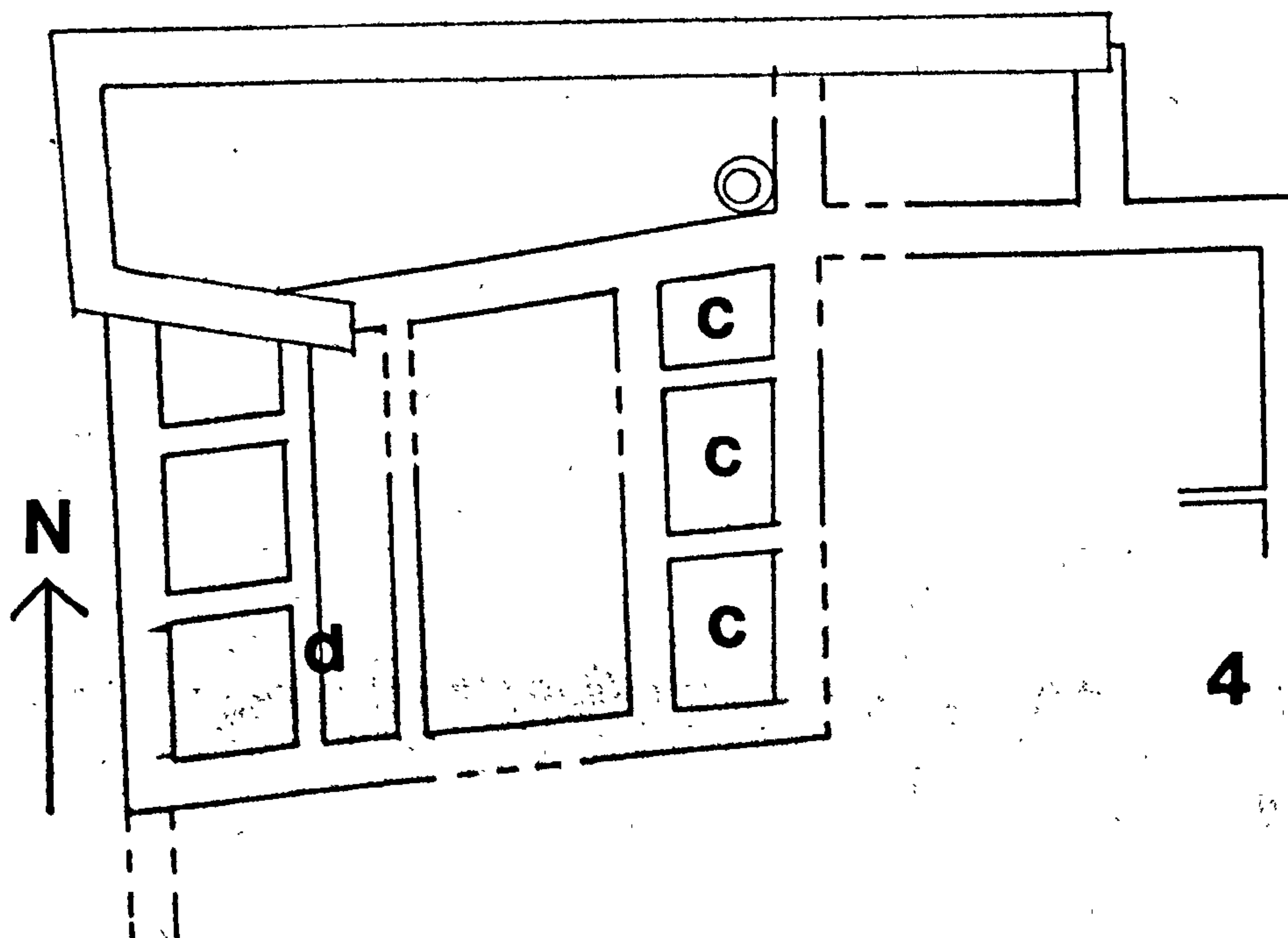
Plan XX. Different versions of 'X' in G-F 12 - 13 at Medinet Habu. (1:200)

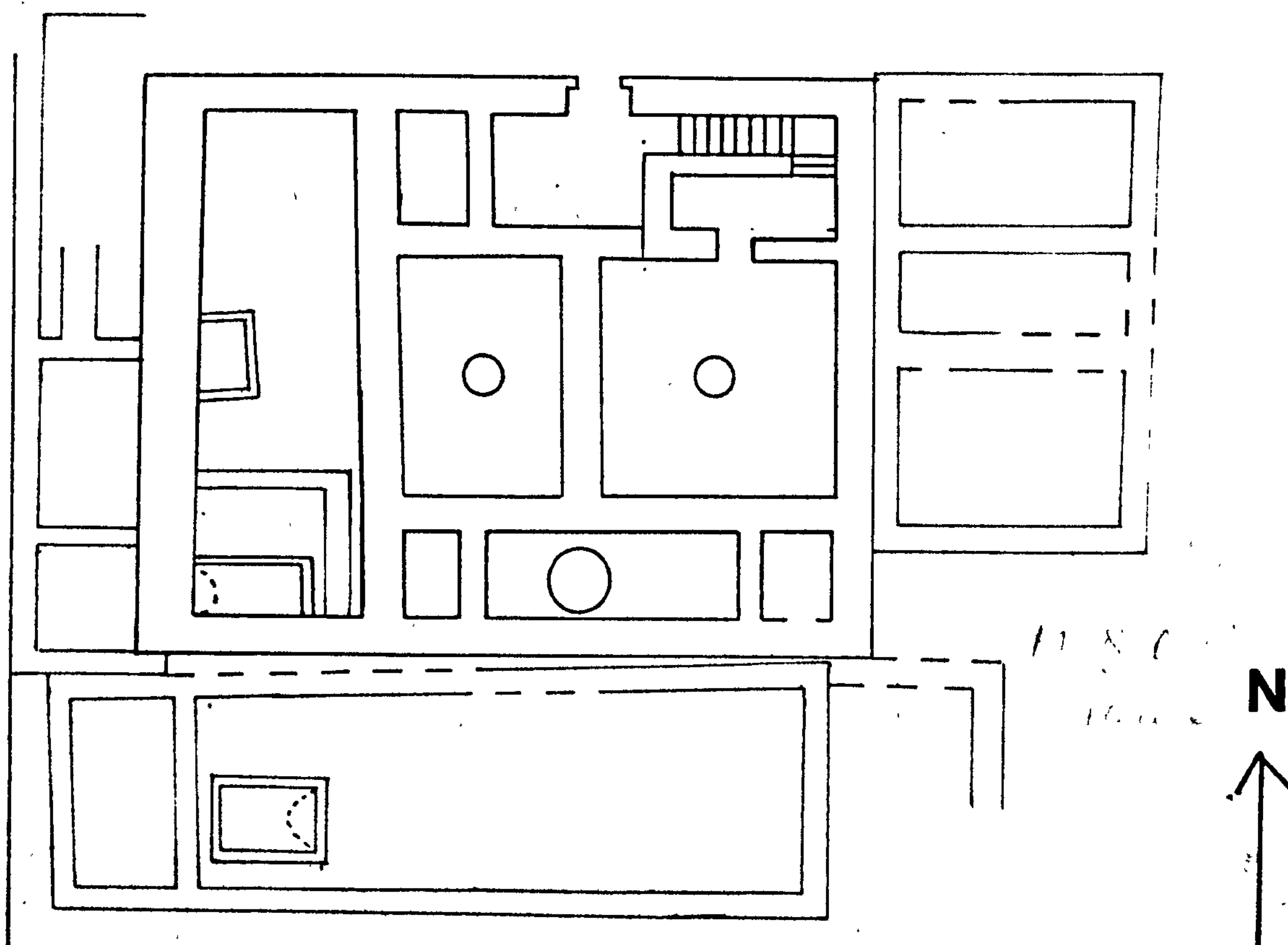


Plan XXI. Strip houses of XXV-XXVI dynasty in G-H I3 at Medinet Habu.

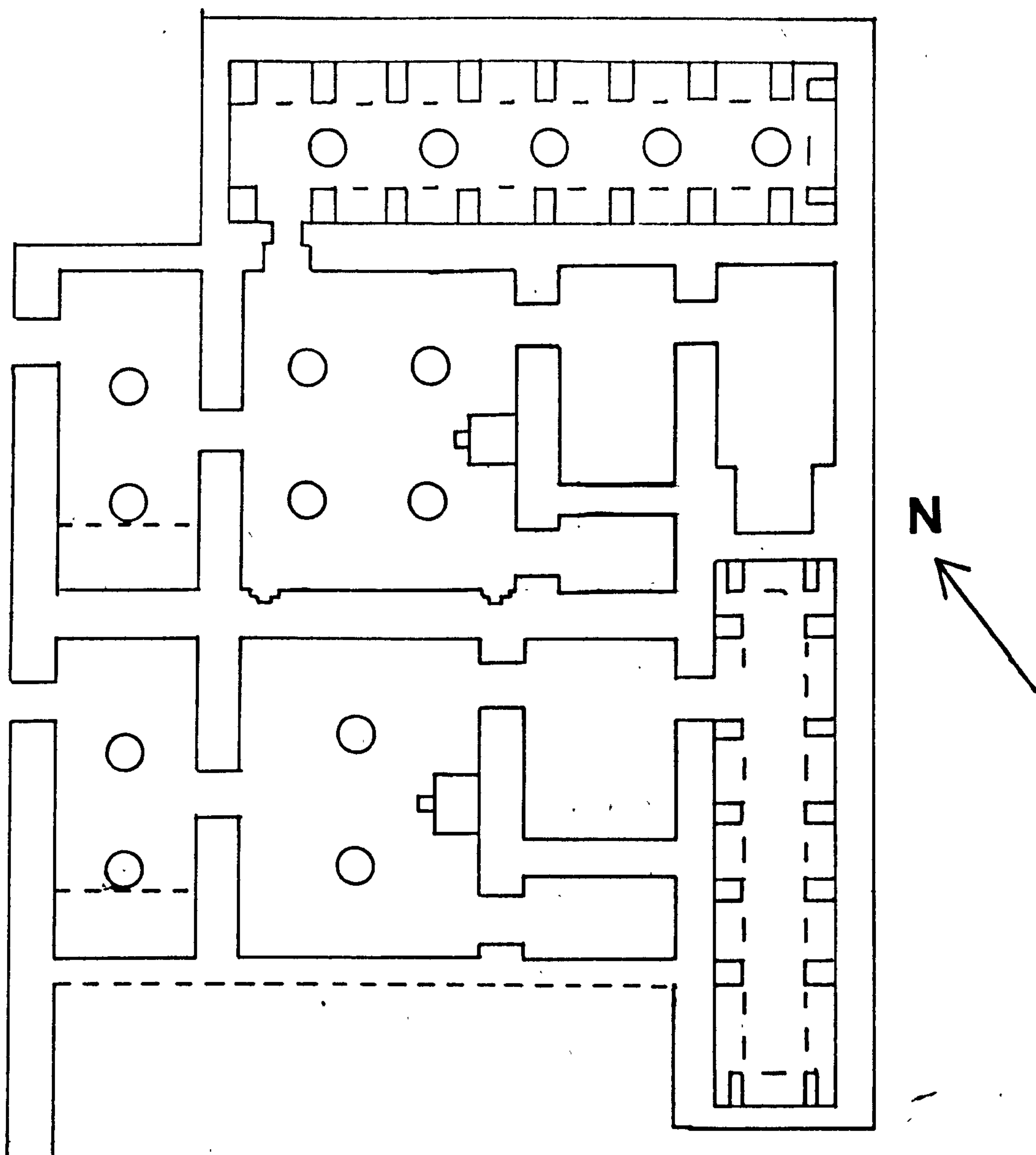


Plan XXII. Buildings 3 & 4 in P-Q 6-7 at Medinet Habu.

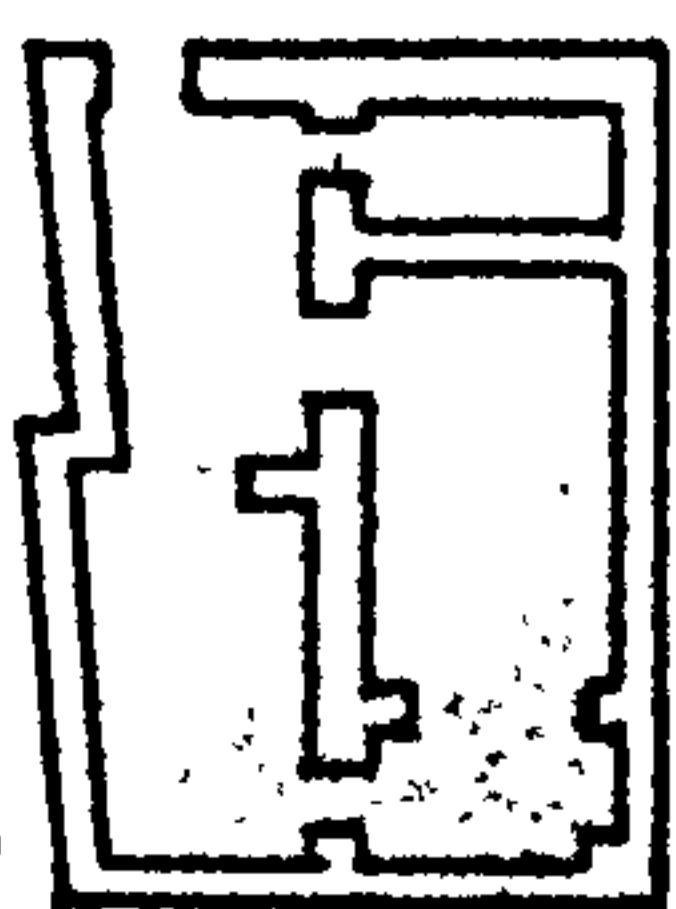




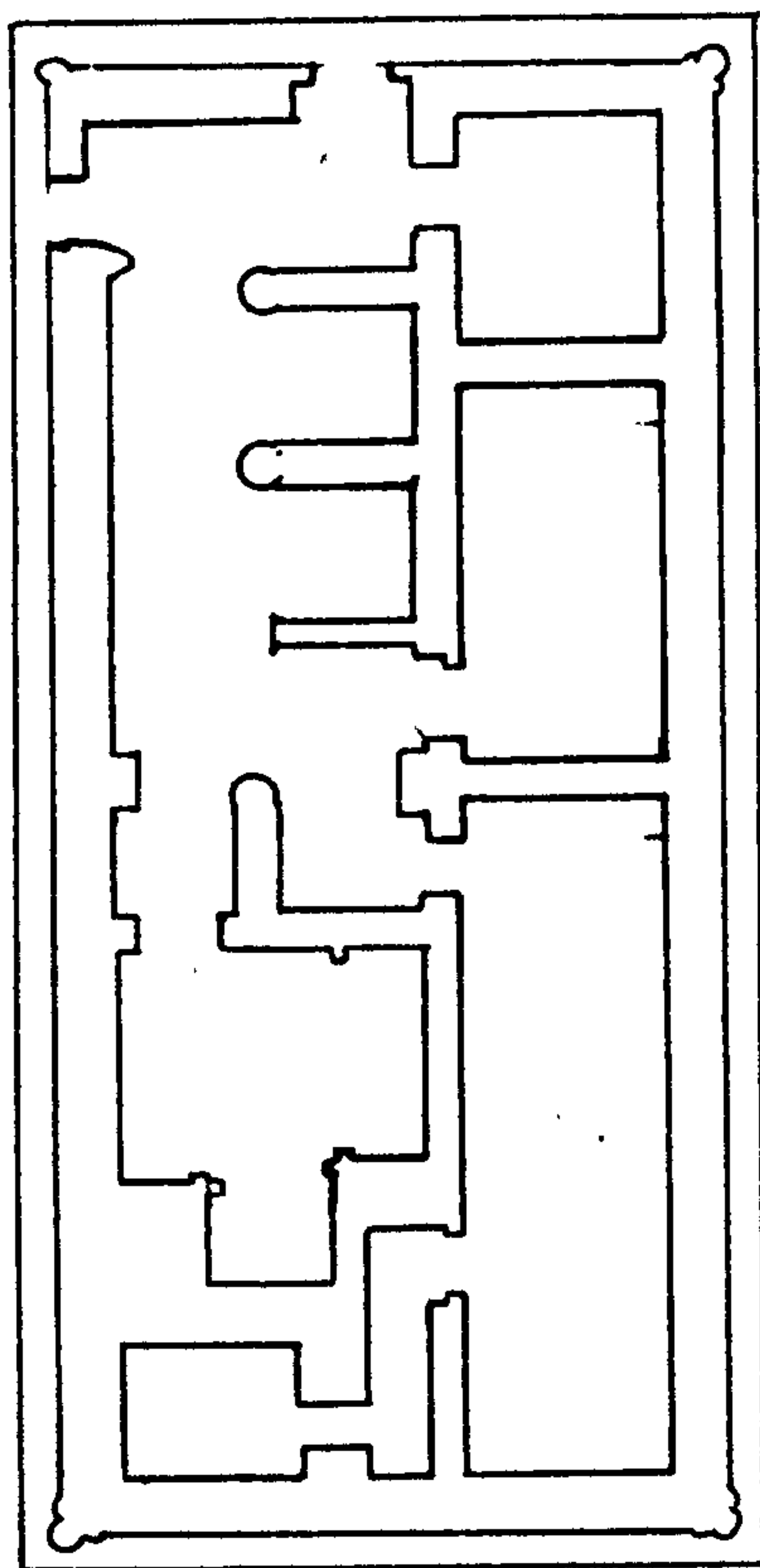
Plan XXIII. House I in M-N 6-7 at Medinet Habu. (1:200)



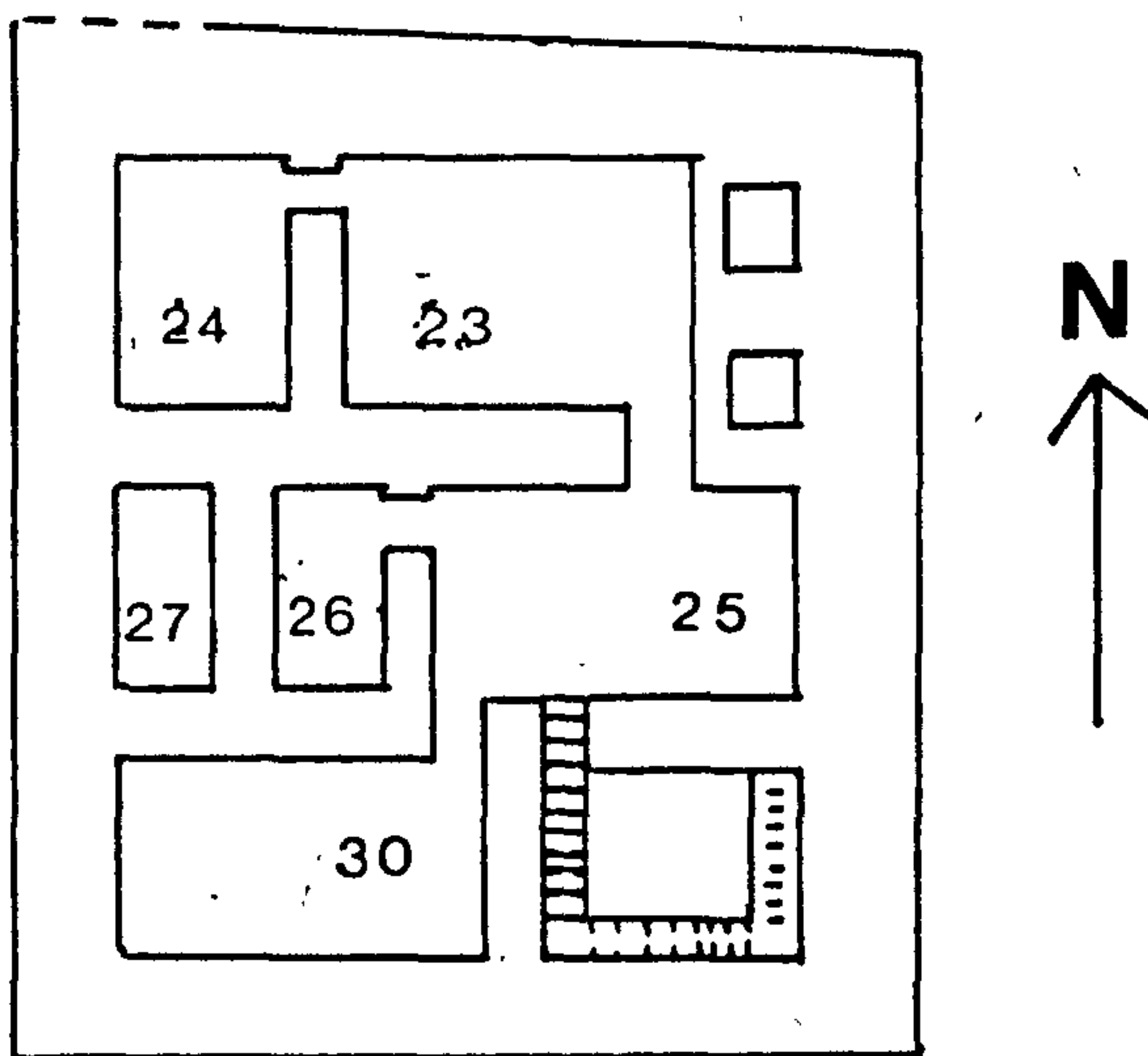
Plan XXV. Harim quarters in the palace of Amenophis III at el-Malqata. (1:200)



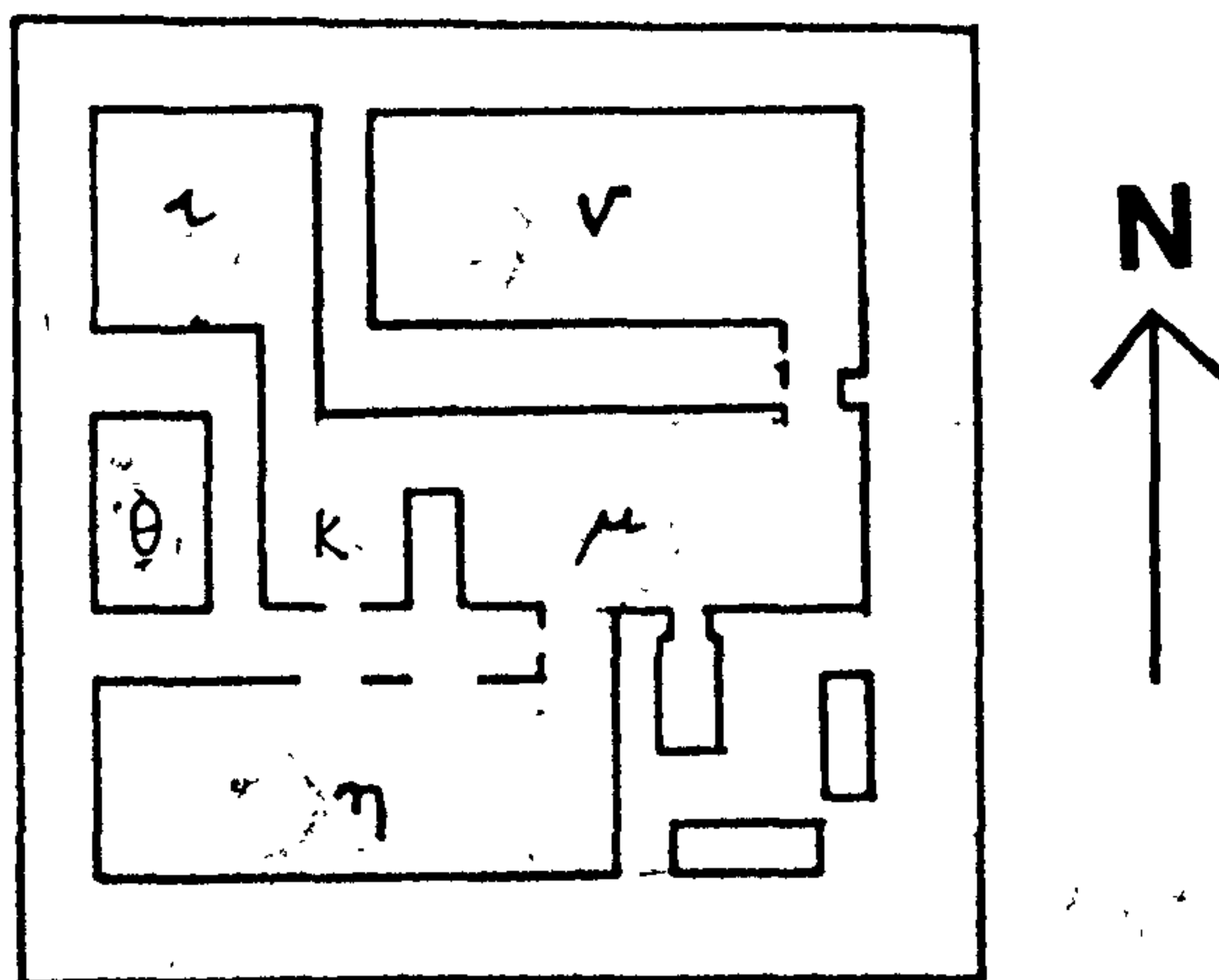
Plan XXVI. A minute
III dynasty house from
Saqqara. (1:200)



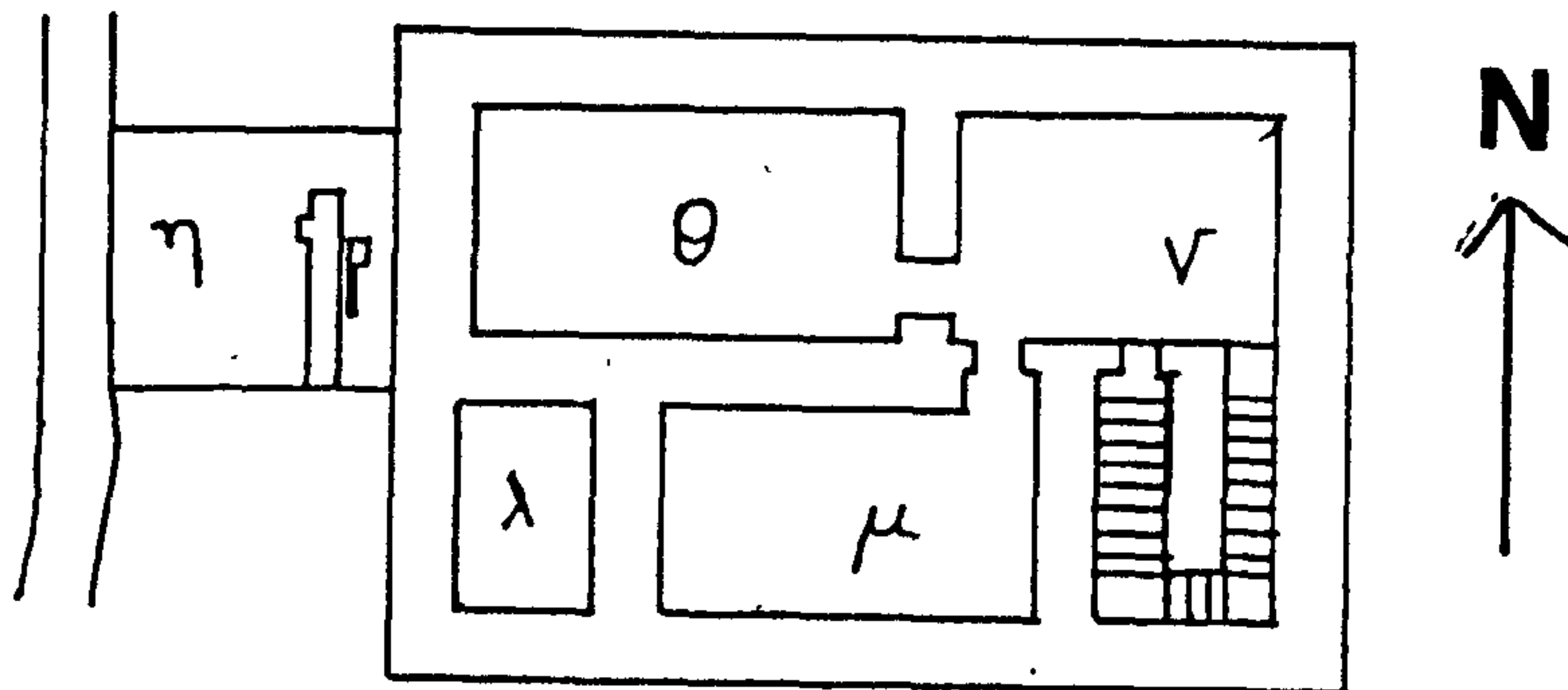
Plan XXVII. 26th dynasty royal pavilion from Saqqara.
(1:200)



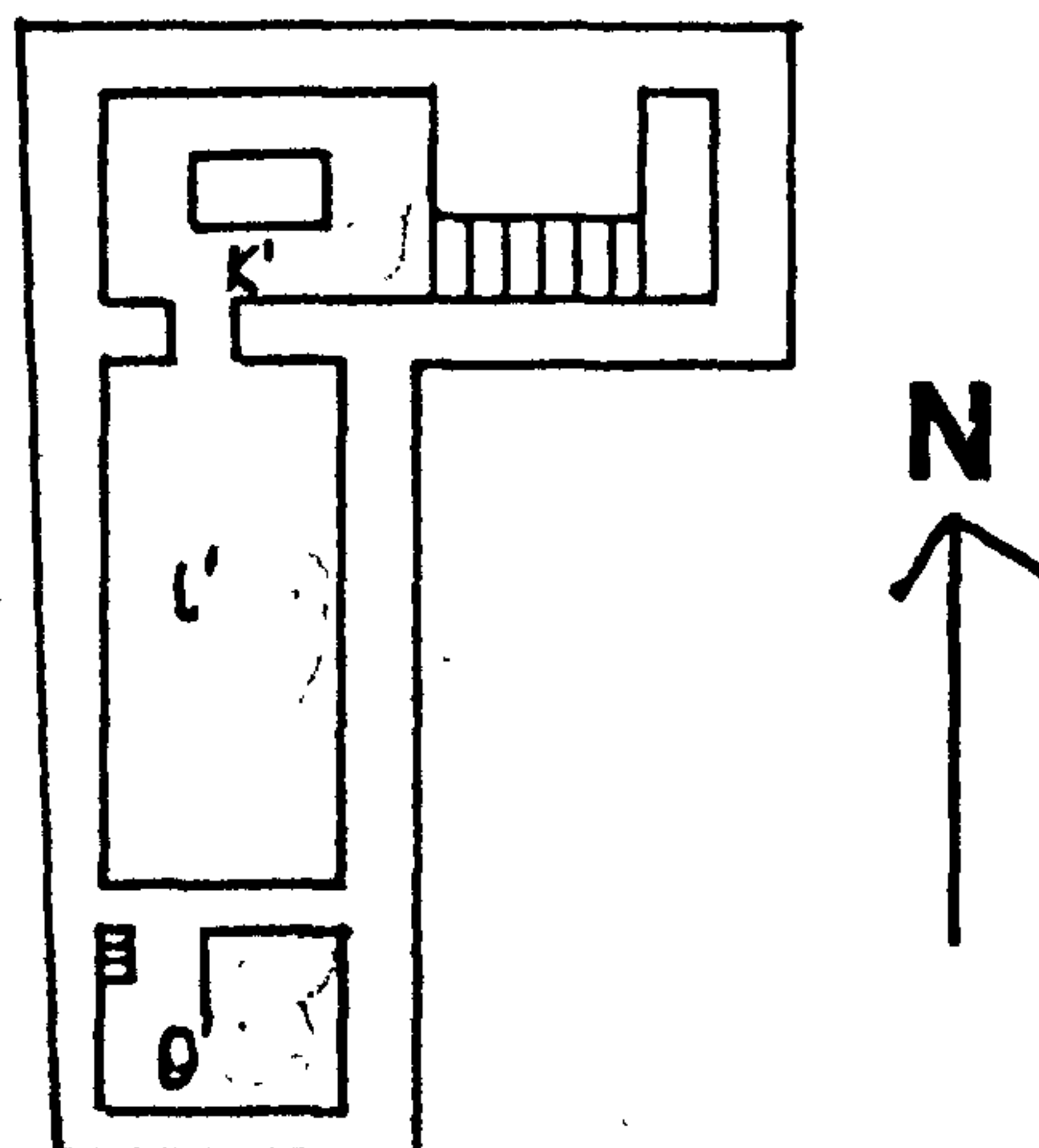
Plan XXVIII. 'La maison centrale', Edfu. (1:200)



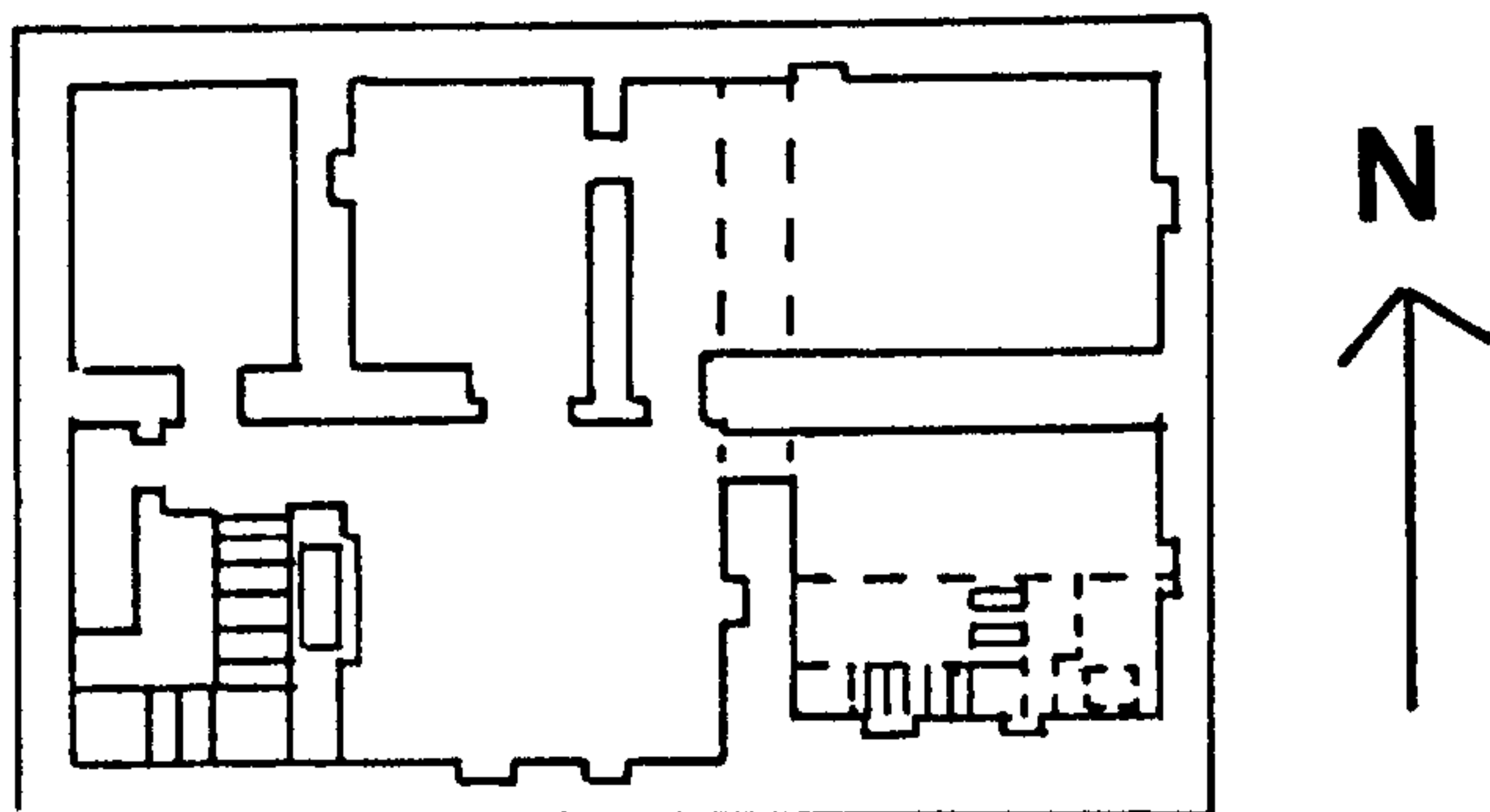
Plan XXIX. House η-v, Edfu. (1:200)



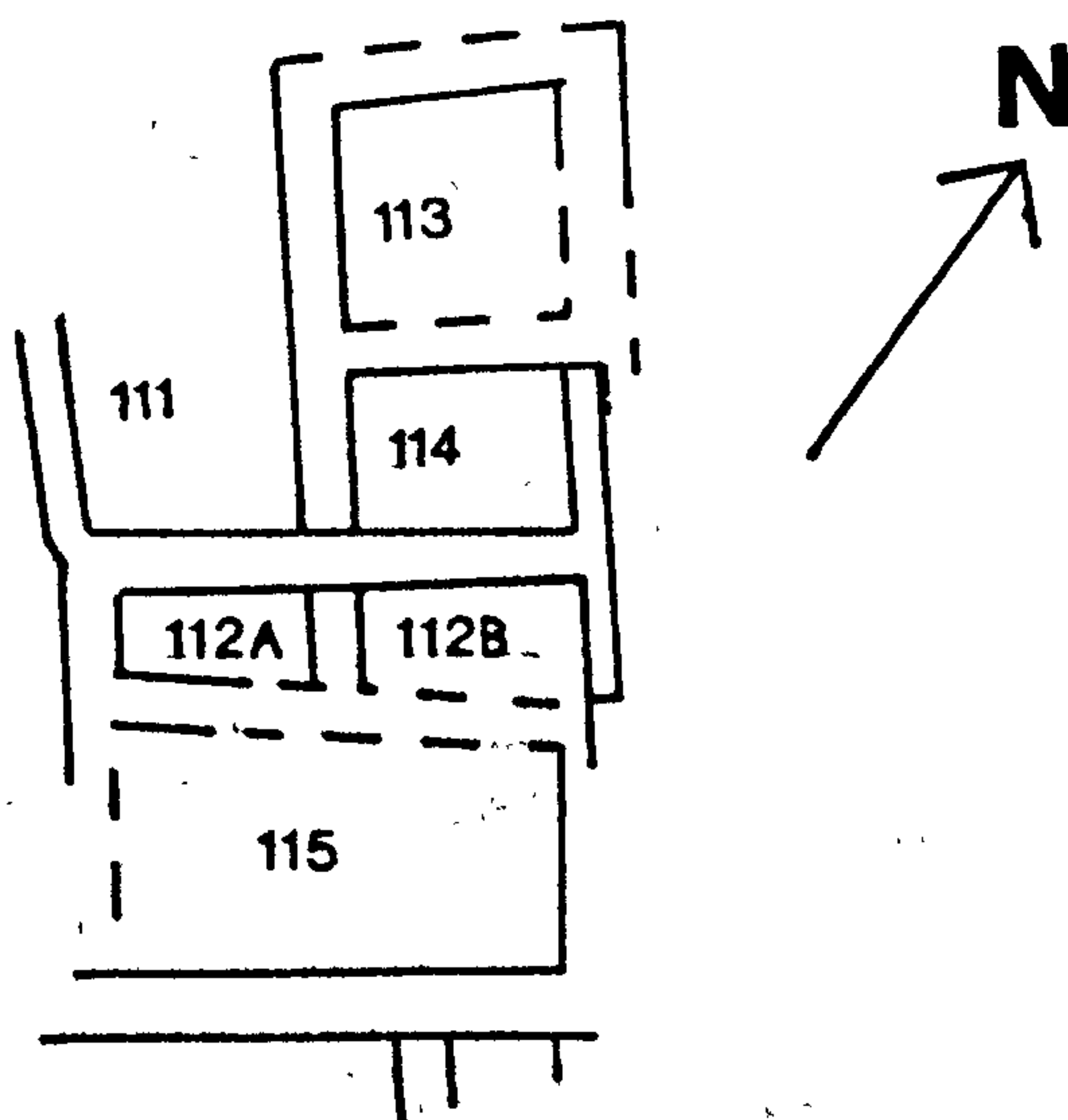
Plan XXX. 'La maison du nord', Edfu. (1:200)



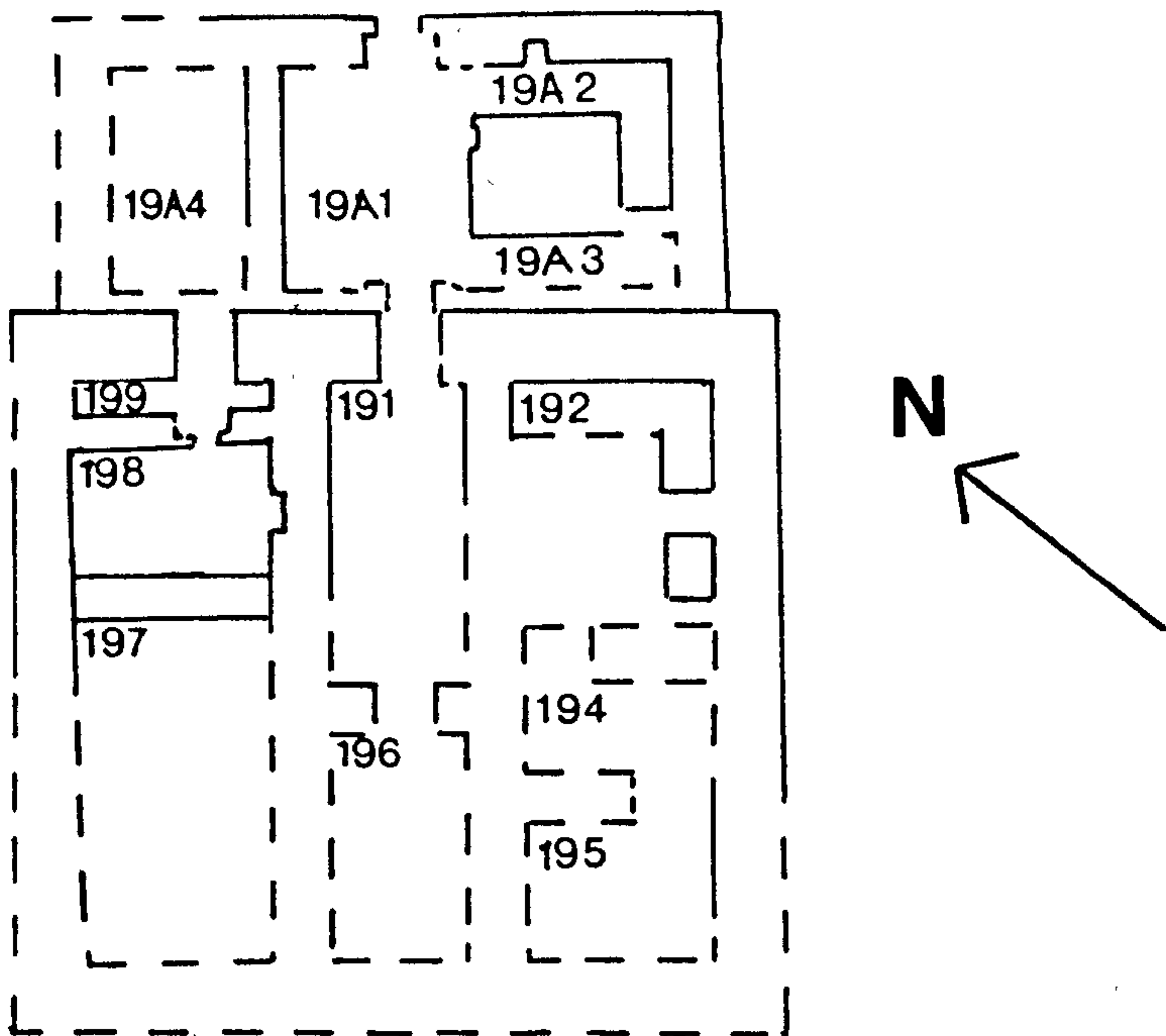
Plan XXXI. An L-shaped house, Edfu. (1:200)



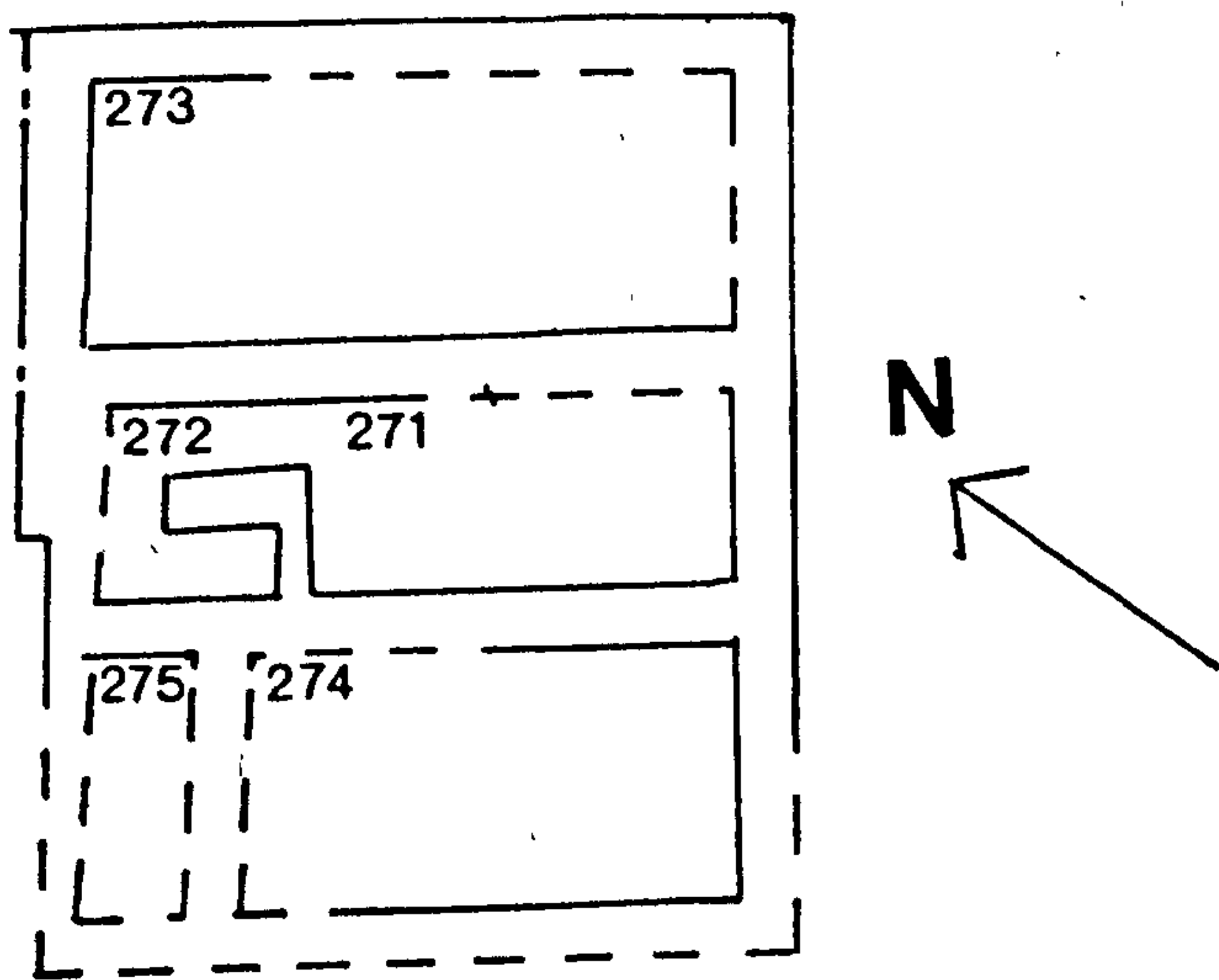
Plan XXXII. Area 5, House H'', Edfu. (1:200)



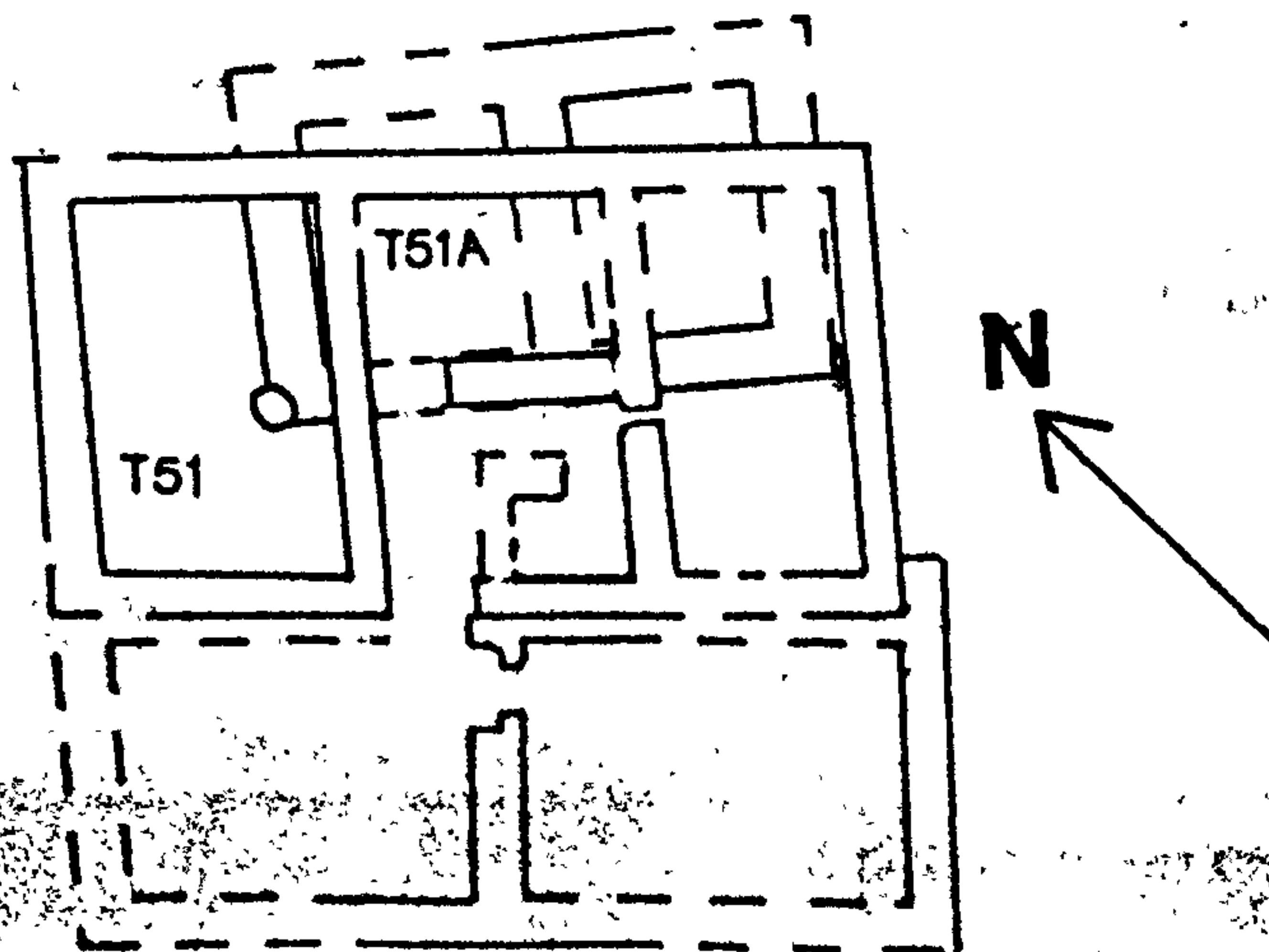
Plan XXXIII. House K11, Elephantine Island. (1:200)



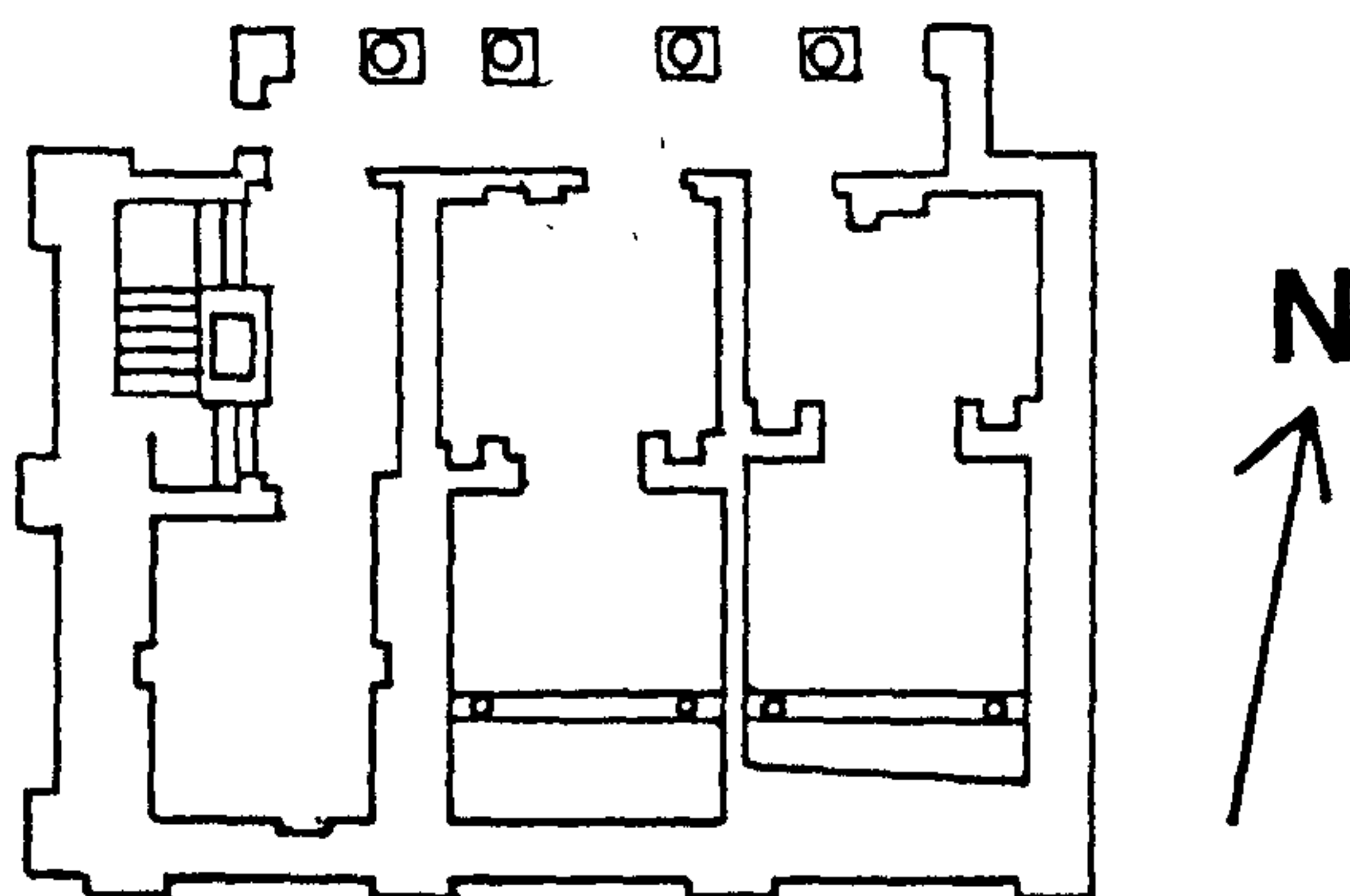
Plan XXIV. House 19 & 19A, Elephantine Island. (1:200)



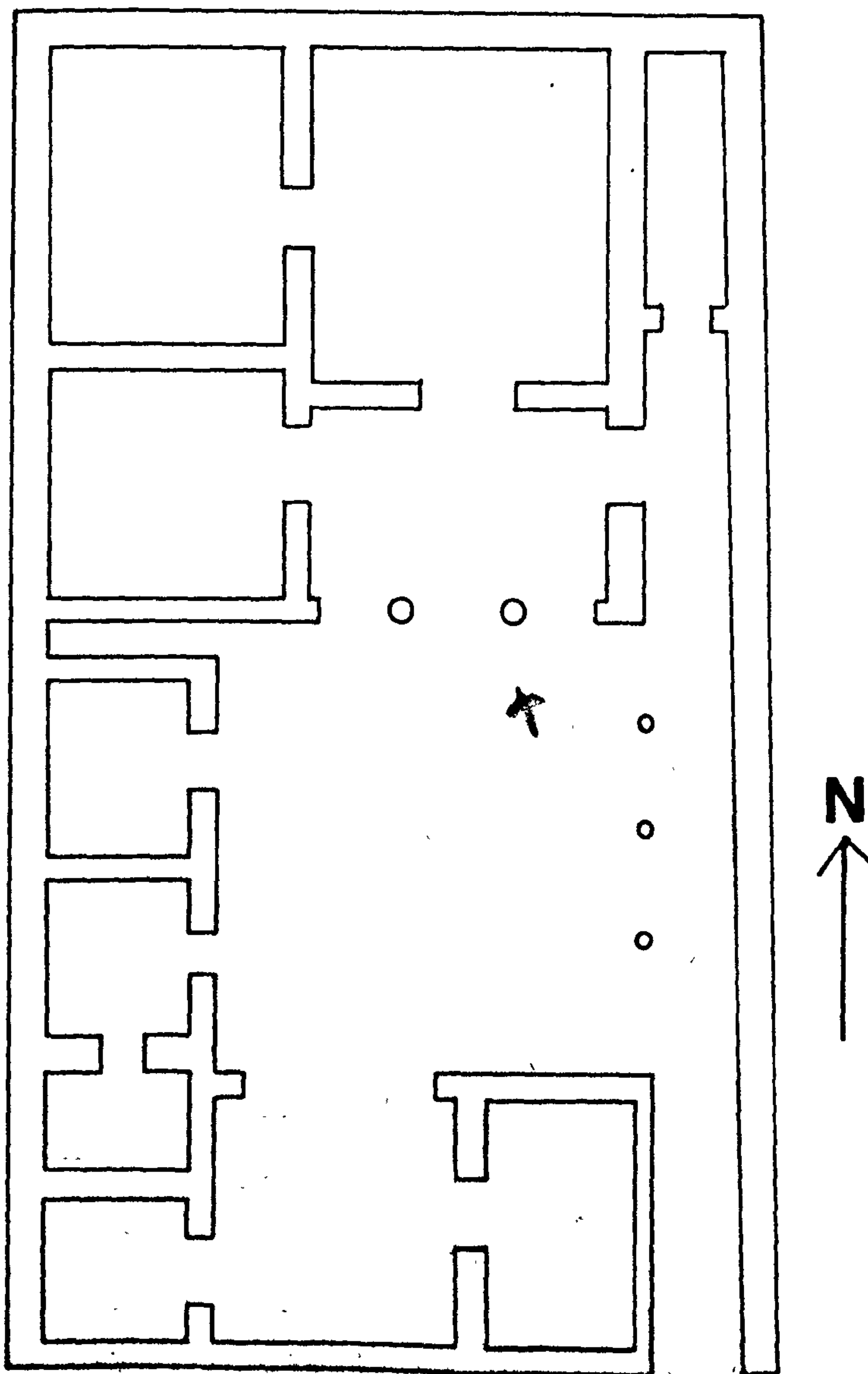
Plan XXXV. House 27, Elephantine Island. (1:200)



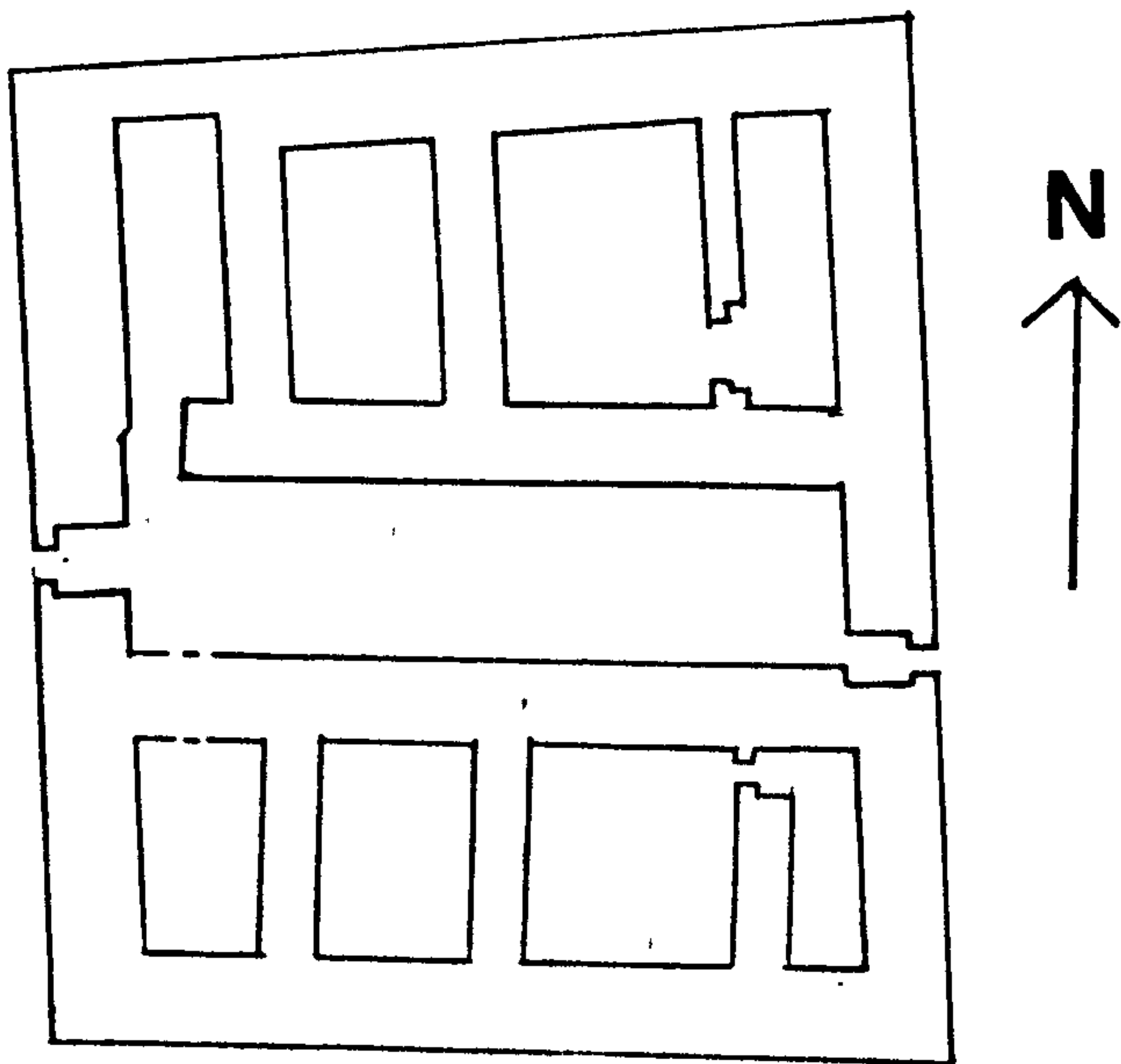
Plan XXXVI. Houses T51 & T51A, Elephantine Island. (1:200)



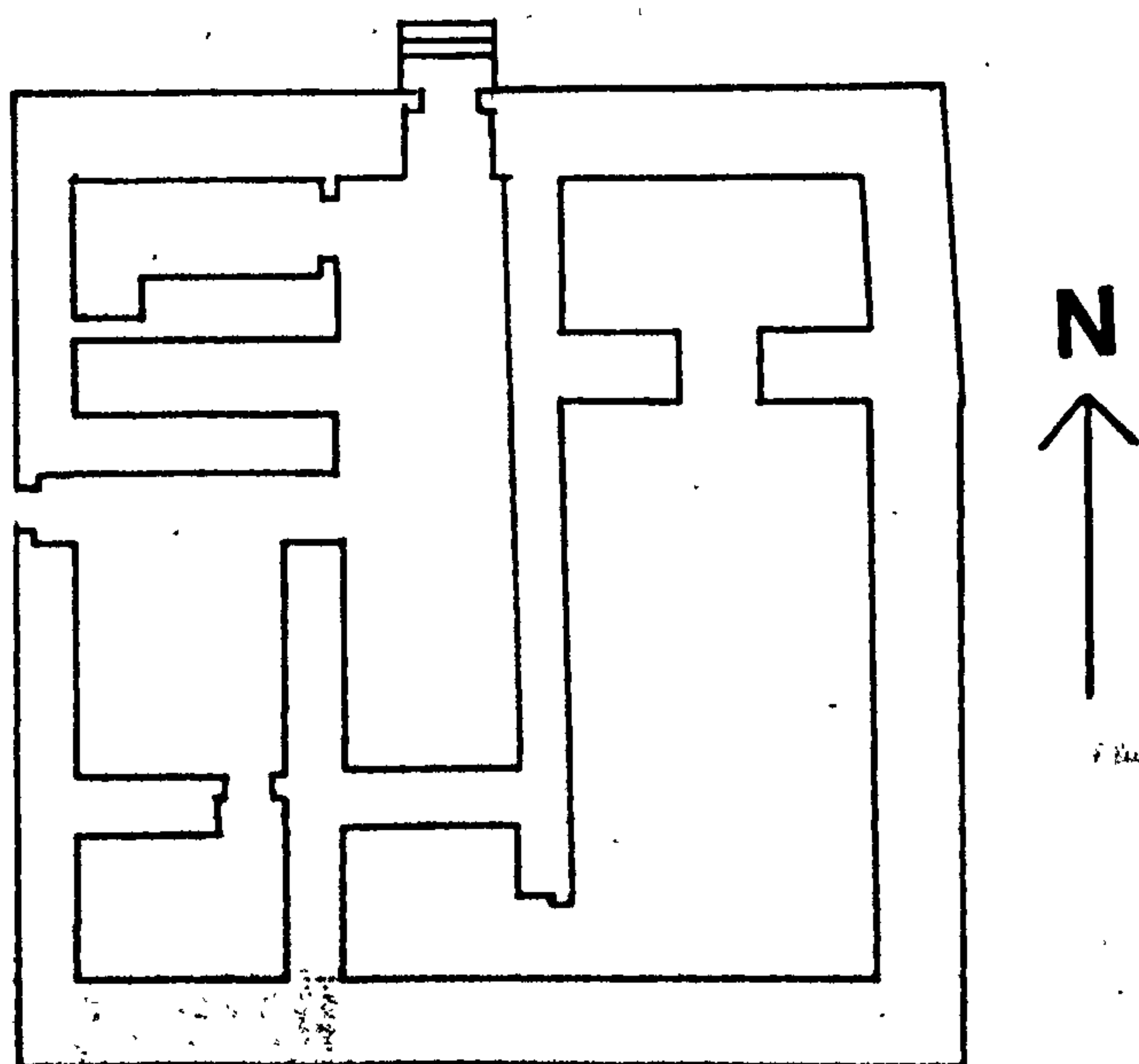
Plan XXXVII. House tomb 5 at Tuna el-Gebel. (1:200)



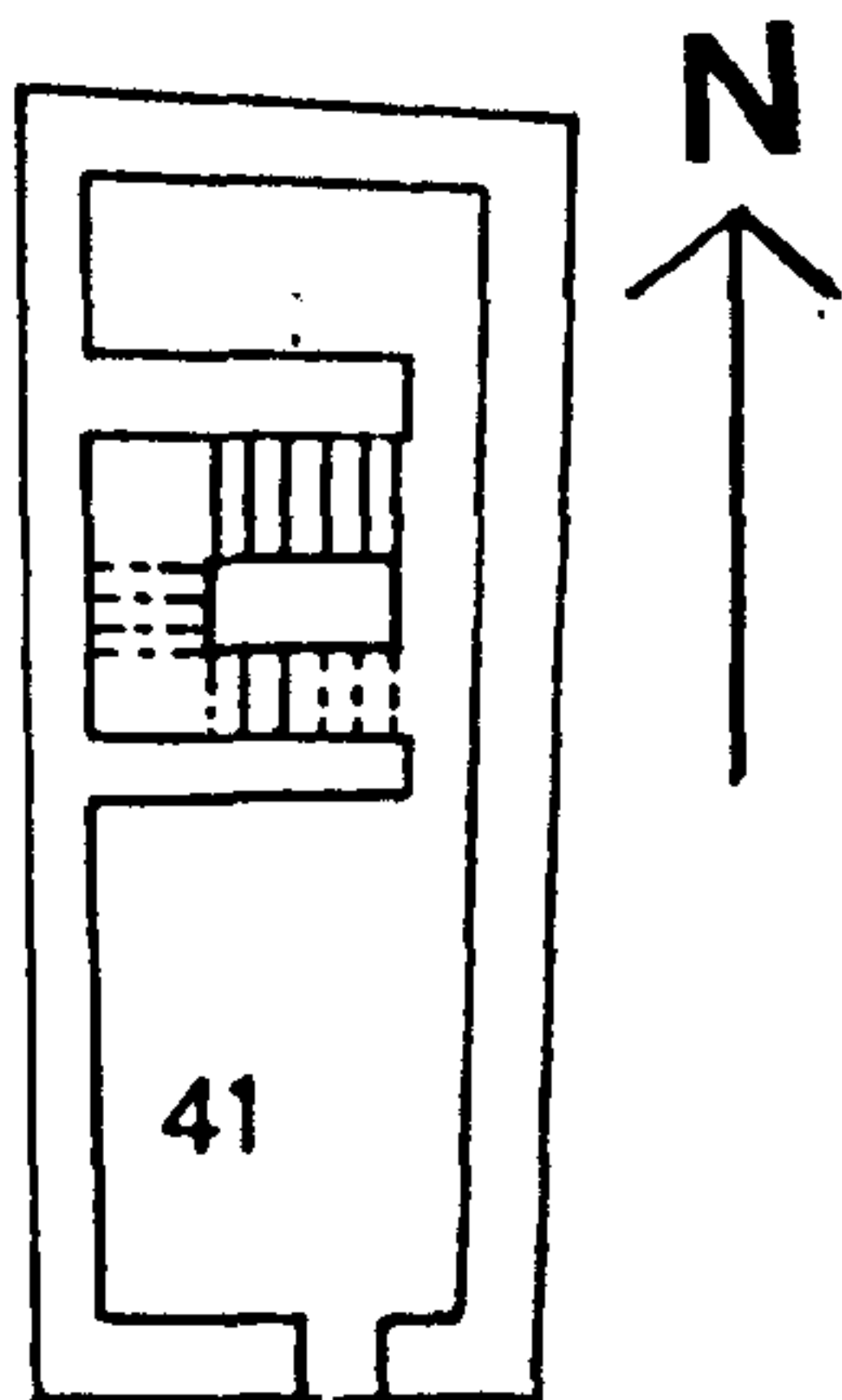
Plan XXXVIII. House XXXIII at Priene. (1:200)



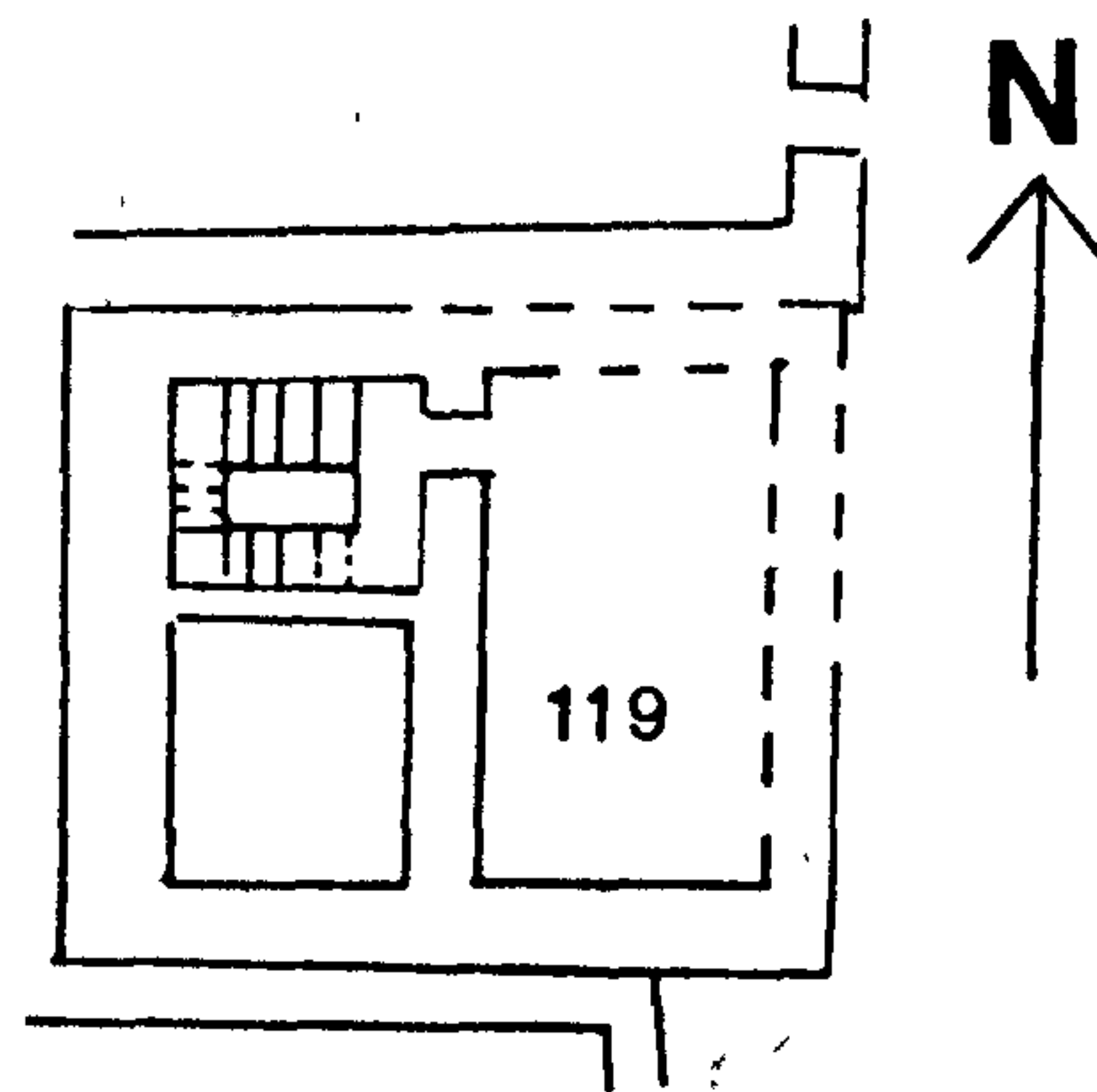
Plan XXXIX. House I (Roman) at Medinet Habu. (1:200)



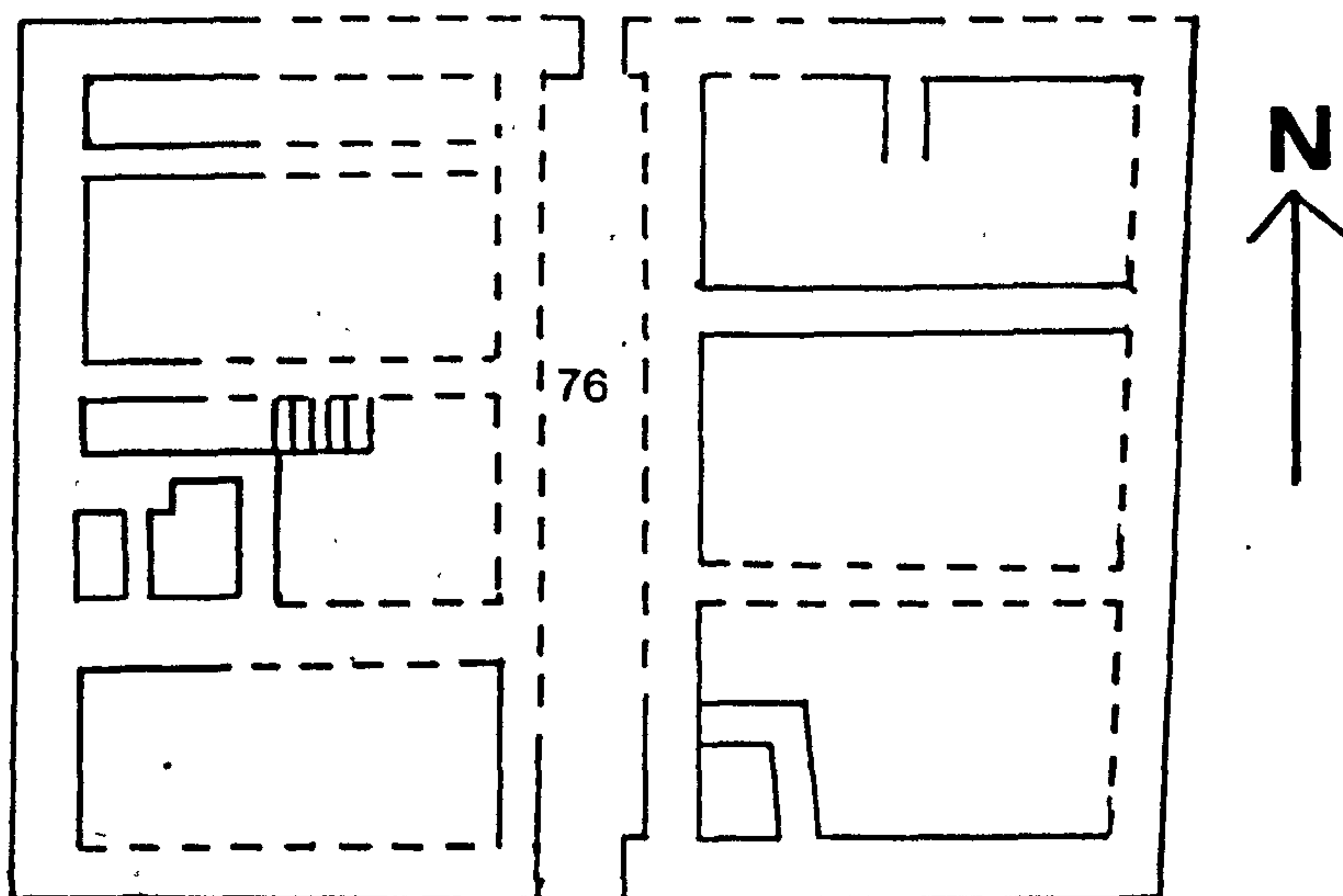
Plan XL. House III (Roman) at Medinet Habu. (1:200)



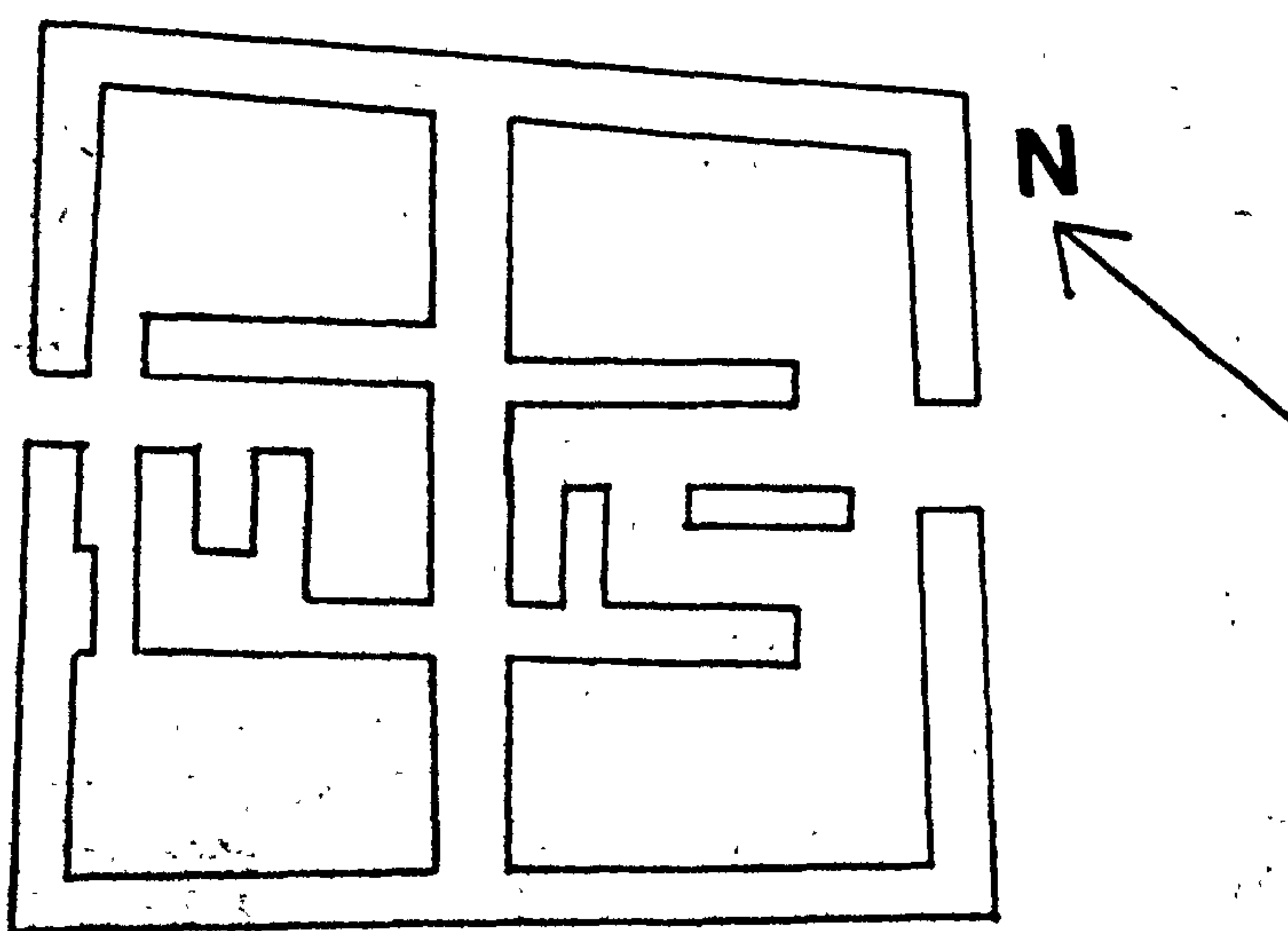
Plan XLI. House 41 at
Djeme. (1:200)



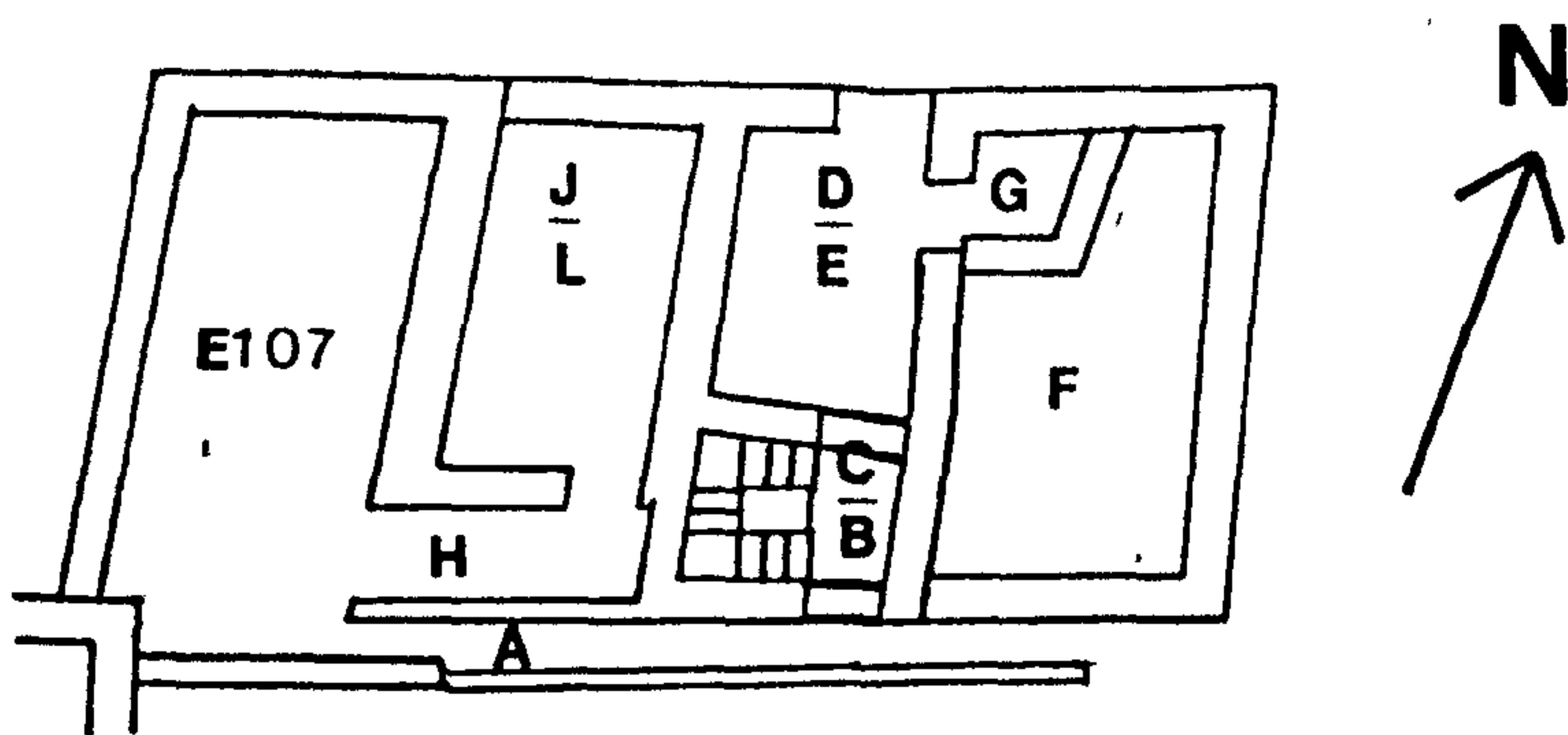
Plan XLII. House 119 at Djeme.
(1:200)



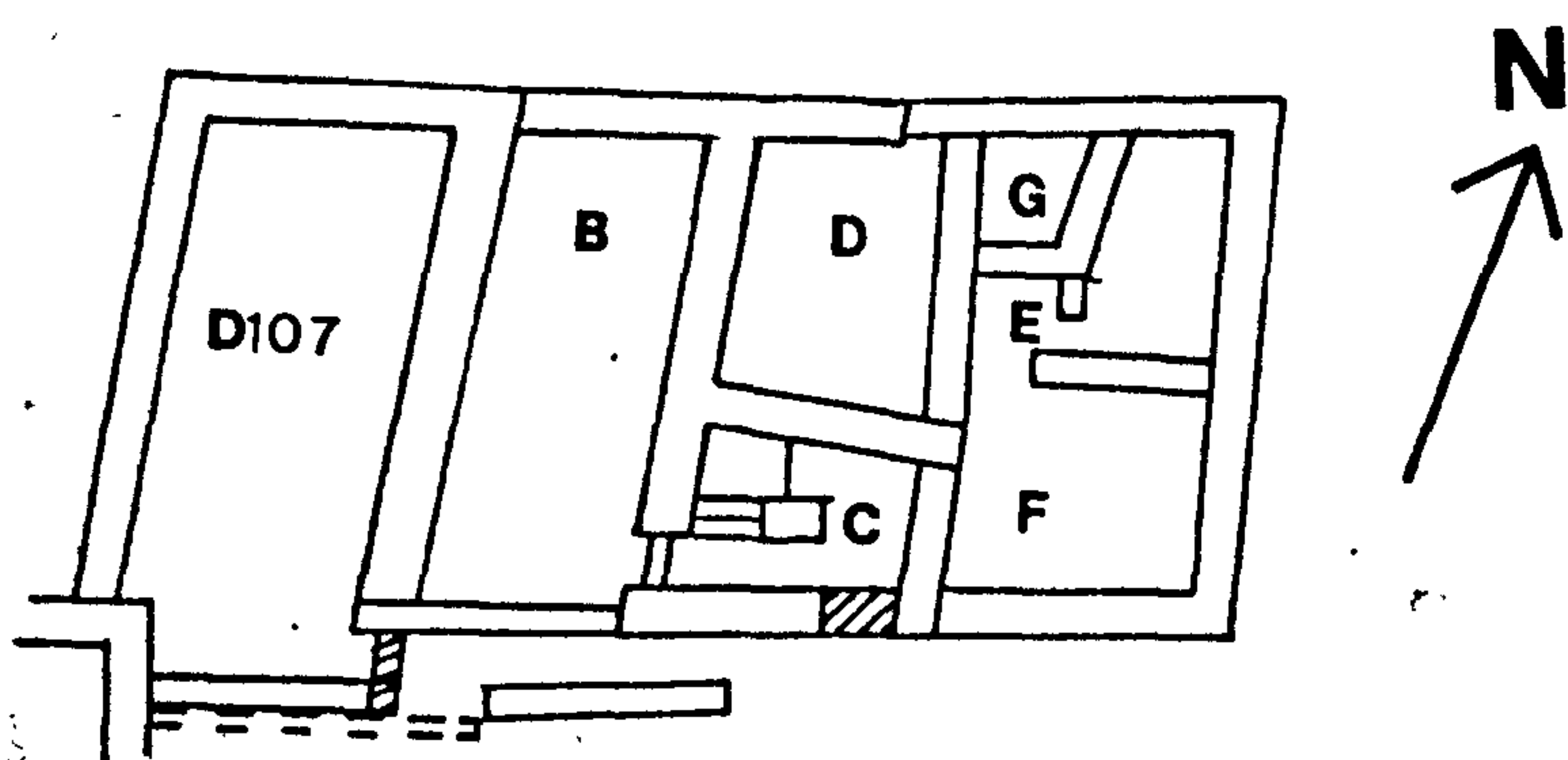
Plan XLIII. House 76 at Djeme. (1:200)



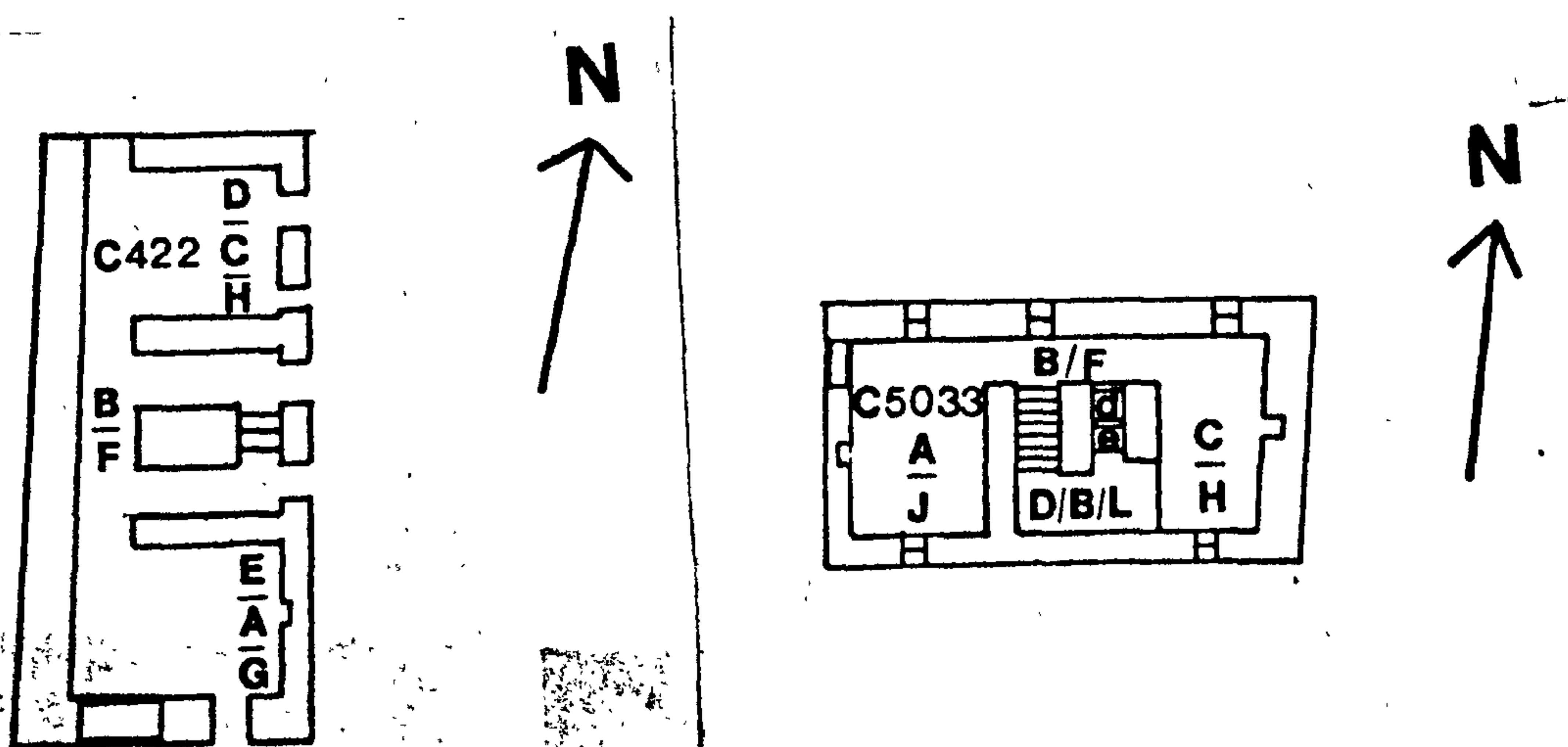
Plan XLIV. Two strip houses southwest of the Coptic church on
the Island of Philae. (1:200)



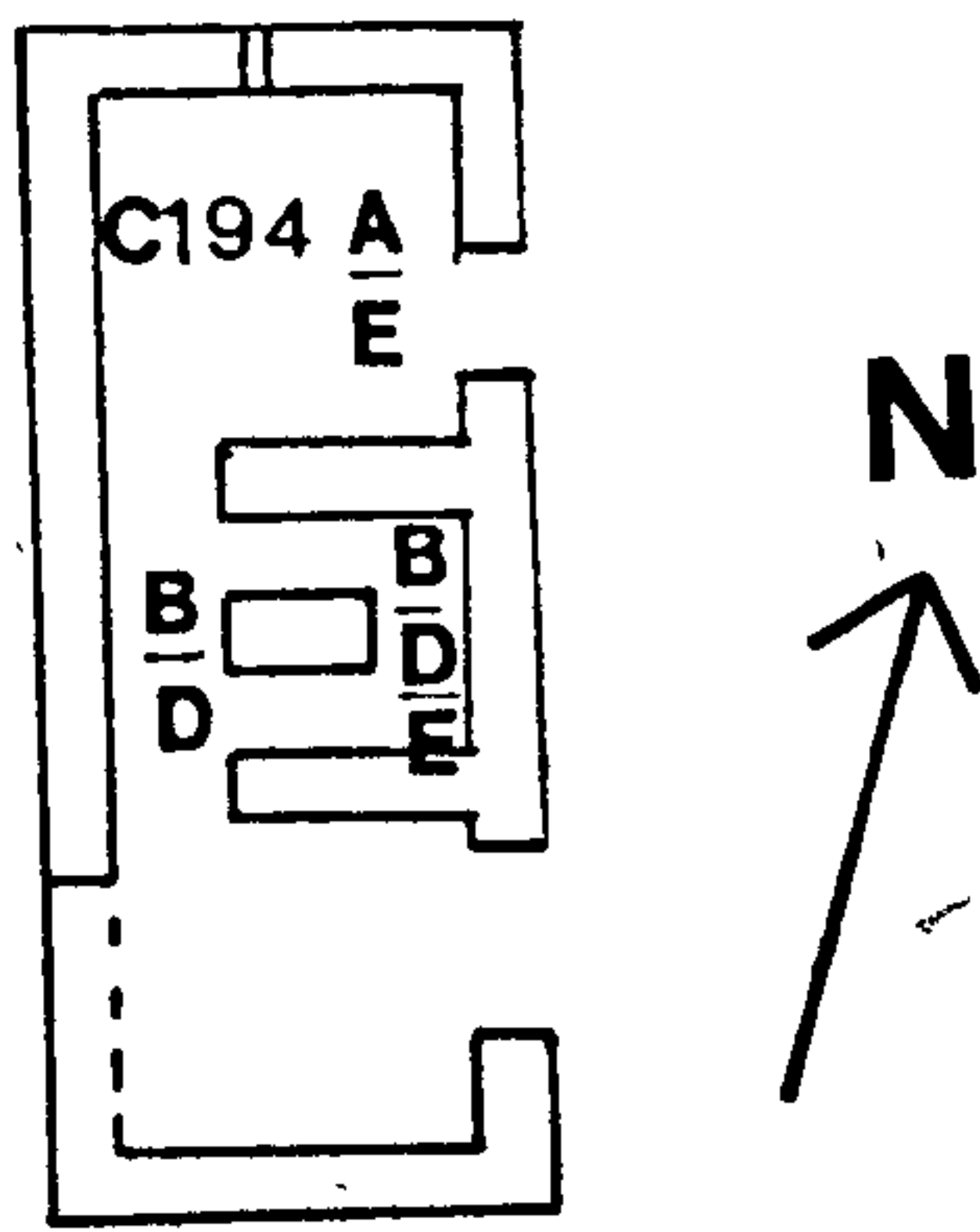
Plan XLV. House E107 at Karanis. (1:200)



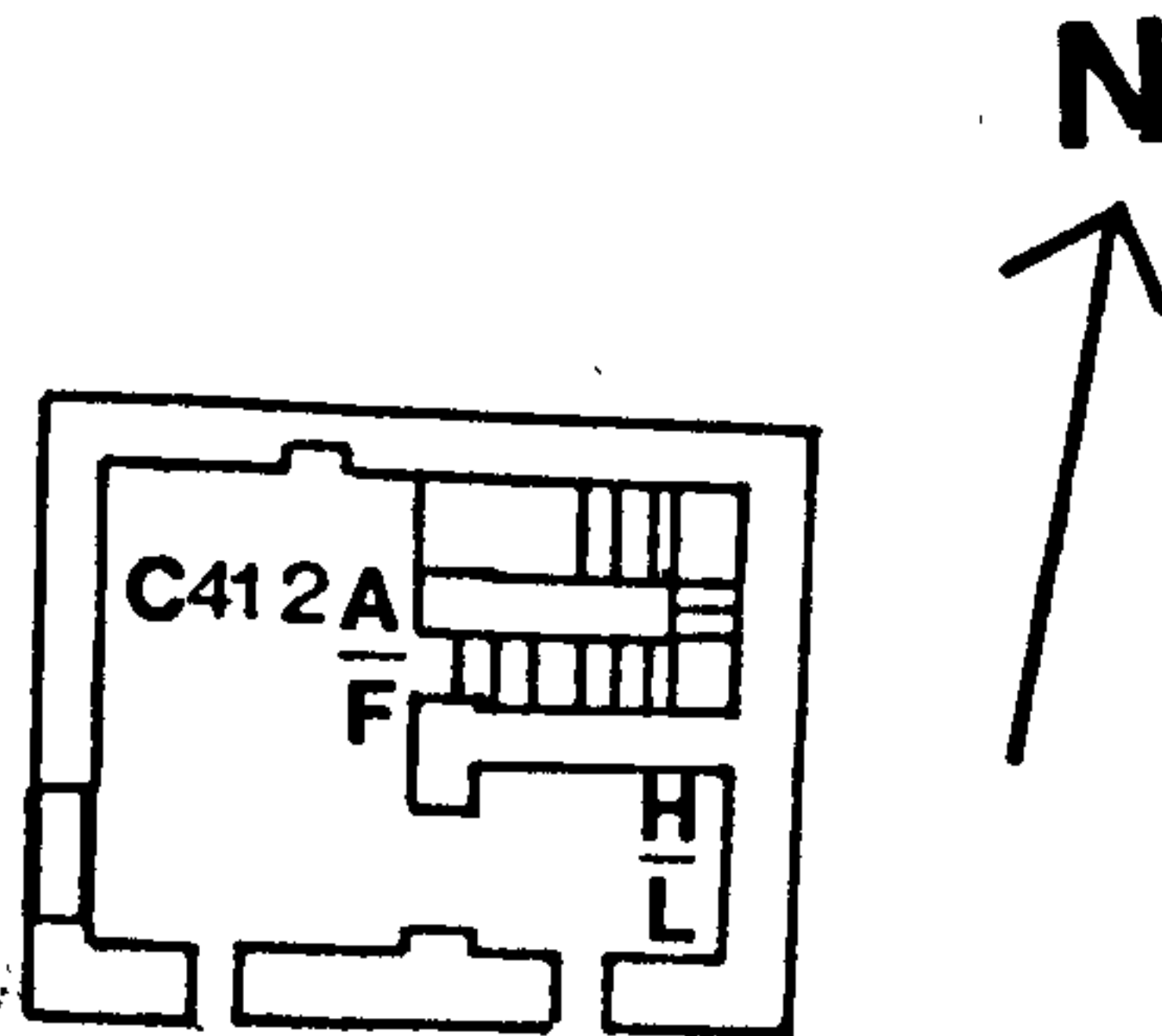
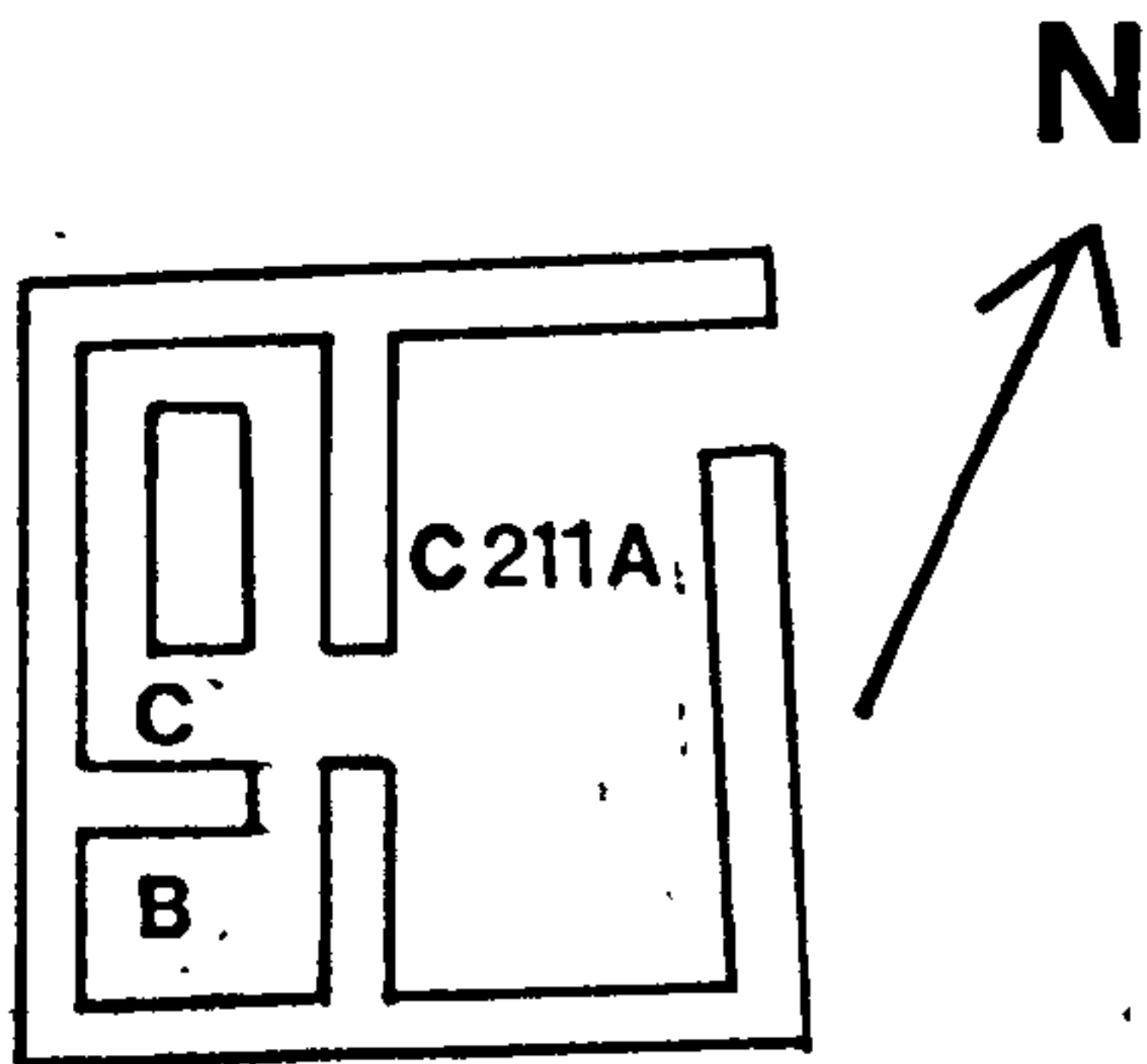
Plan XLVI. House D107 at Karanis. (1:200)



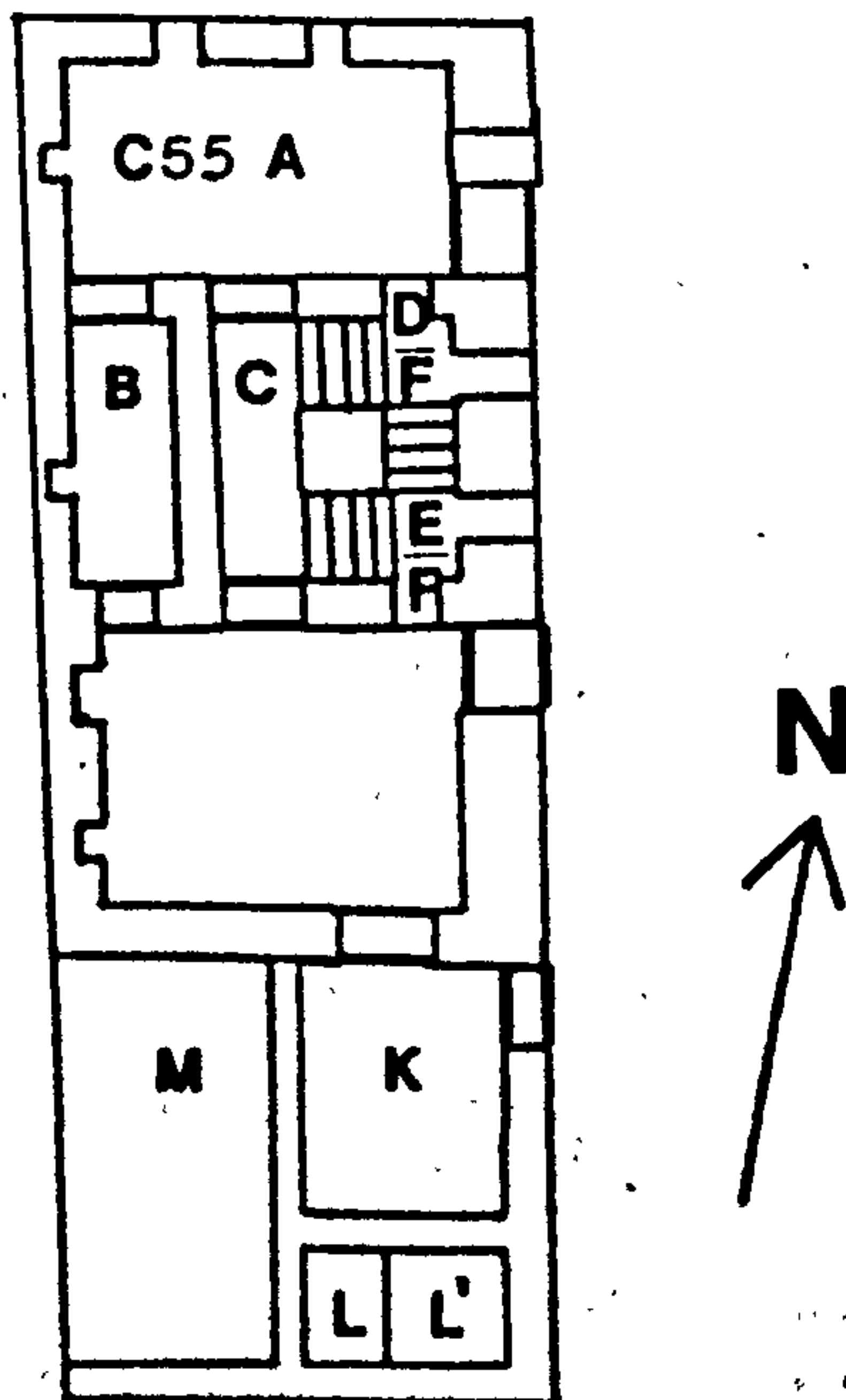
Plan XLVII. Houses C422 & C5033 at Karanis. (1:200)



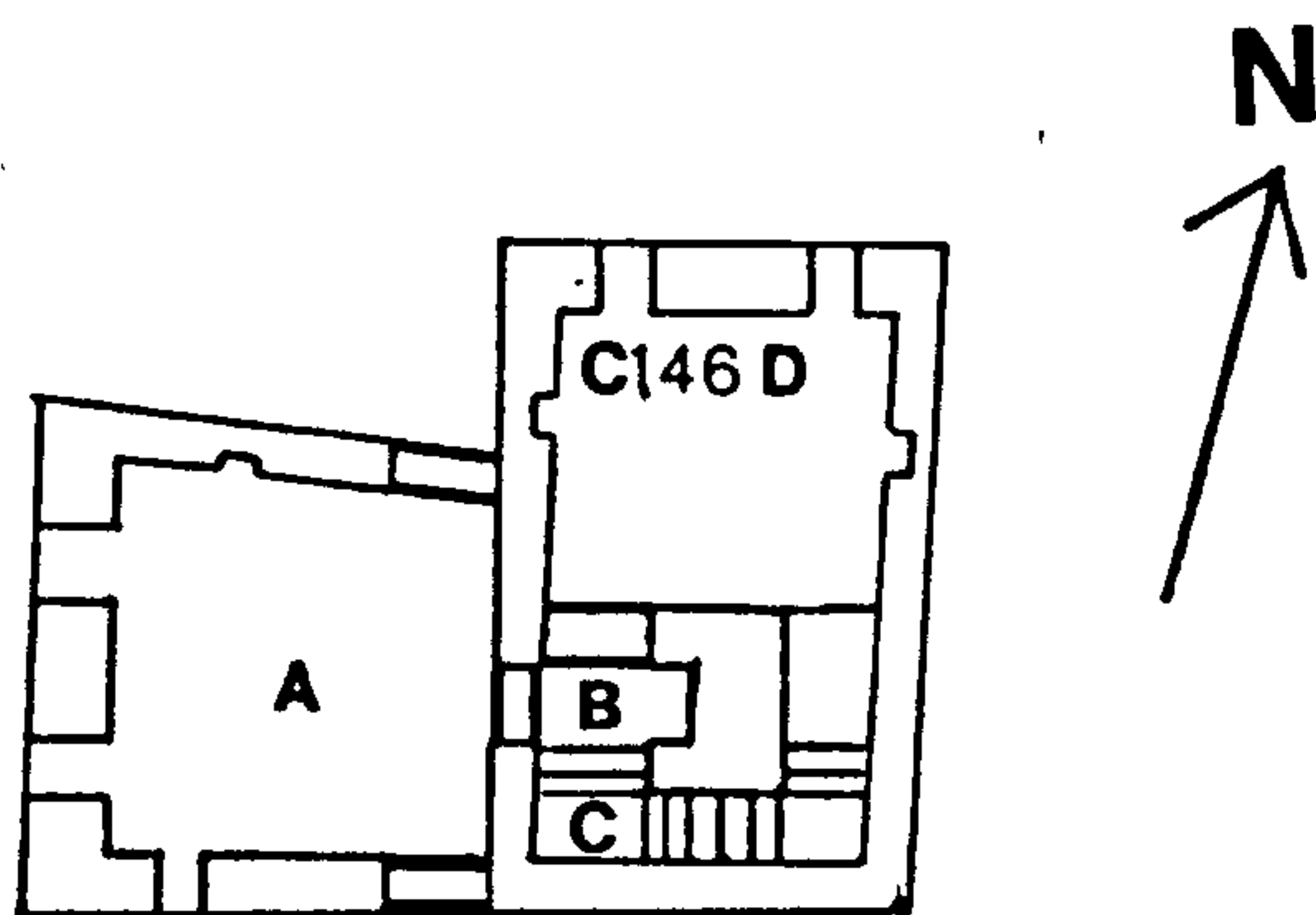
Plan XLVIII. House C194 at Karanis. (1:200)



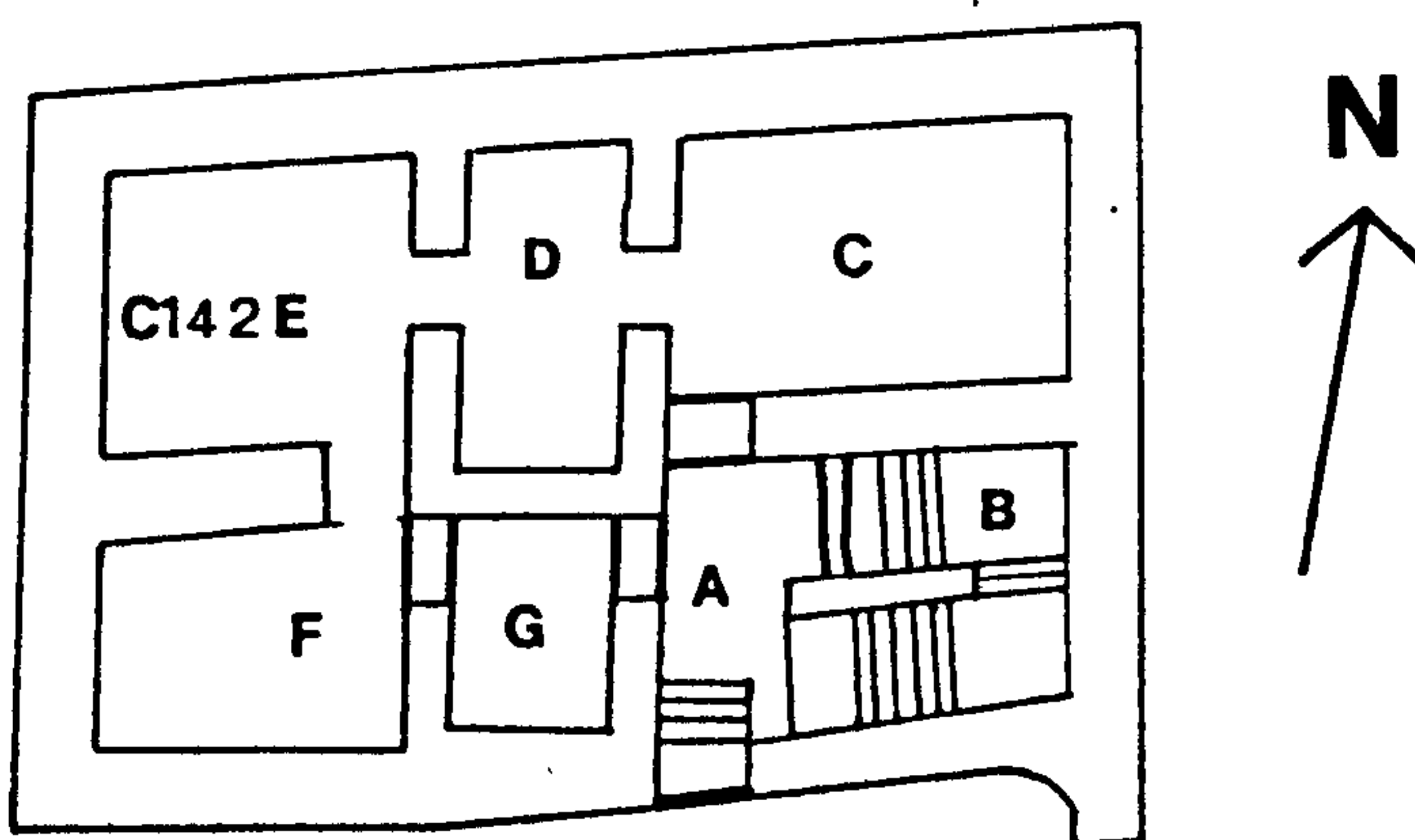
Plan XLIX. Houses C211 & C412 at Karanis. (1:200)



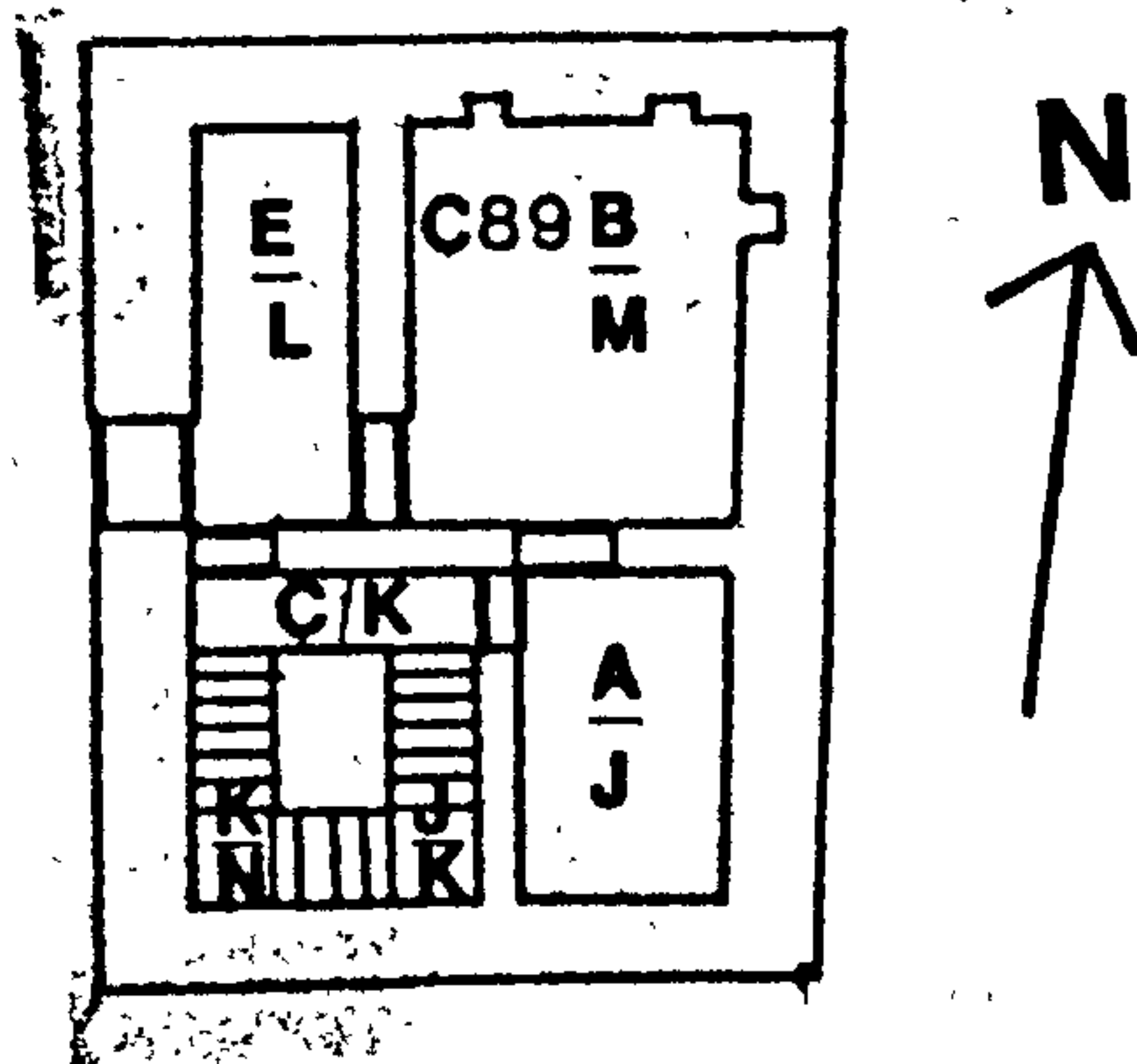
Plan L. House C65 at Karanis. (1:200)



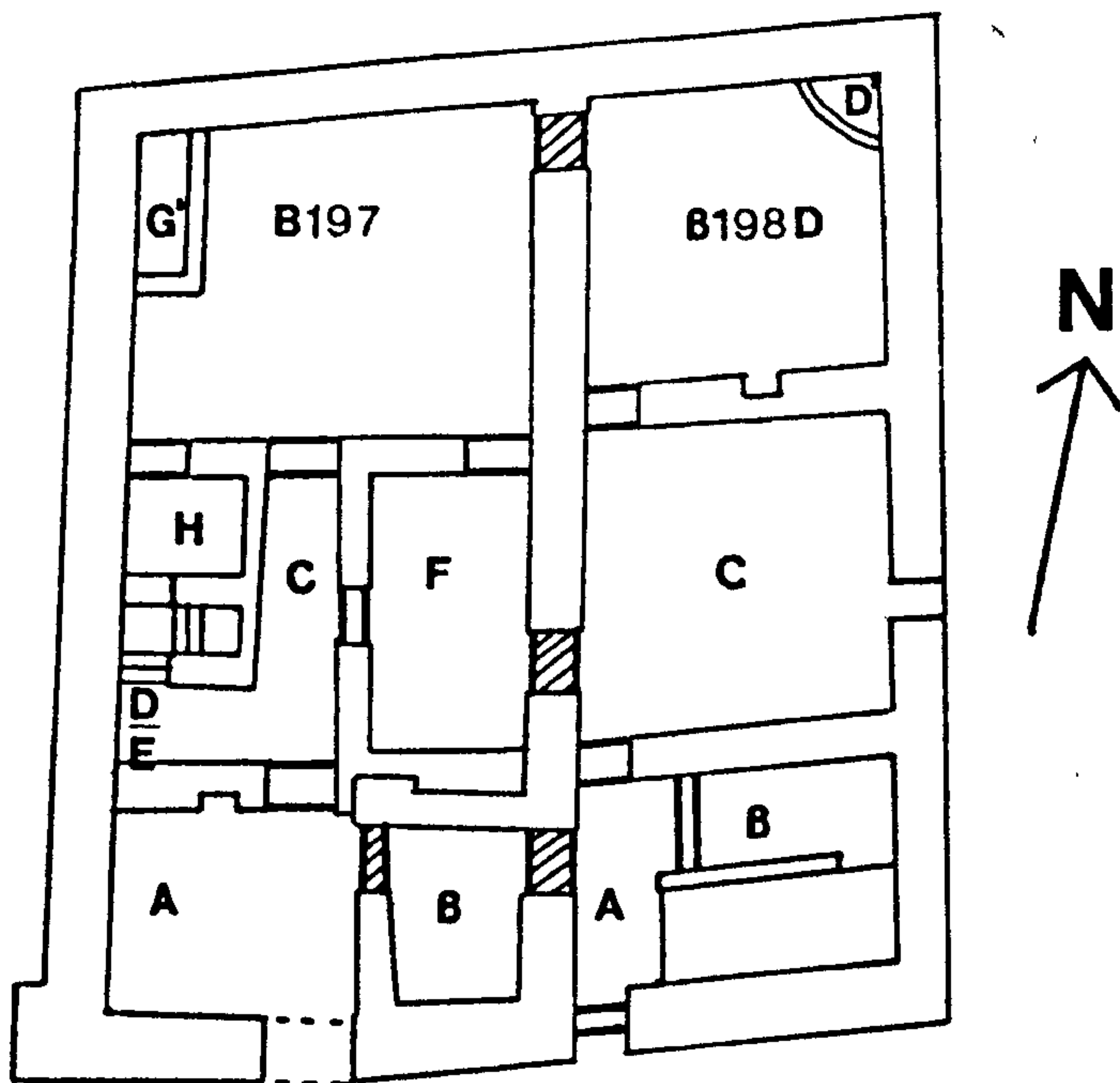
Plan LI. House C146 at Karanis. (1:200)



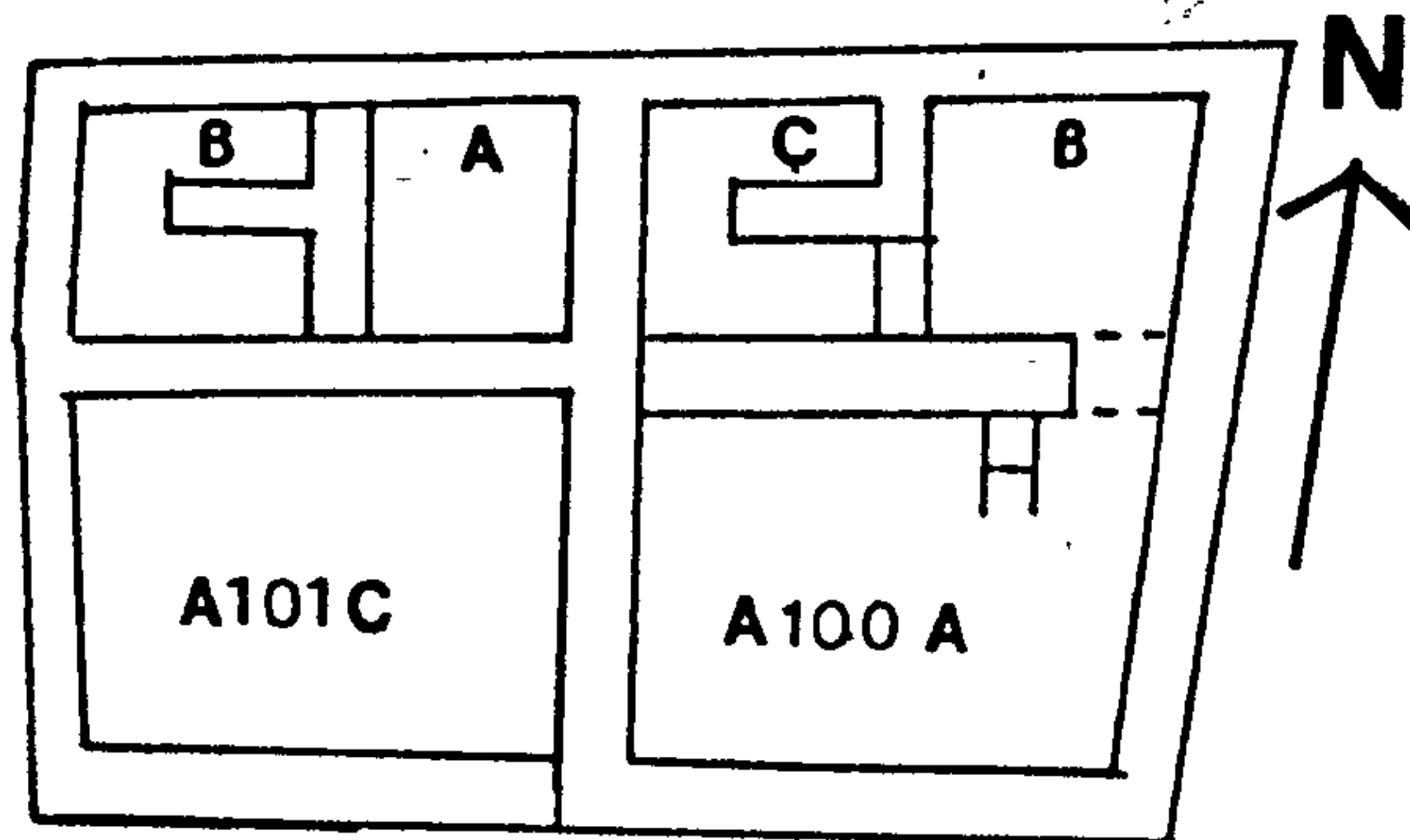
Plan LII. House C142 at Karanis. (1:200)



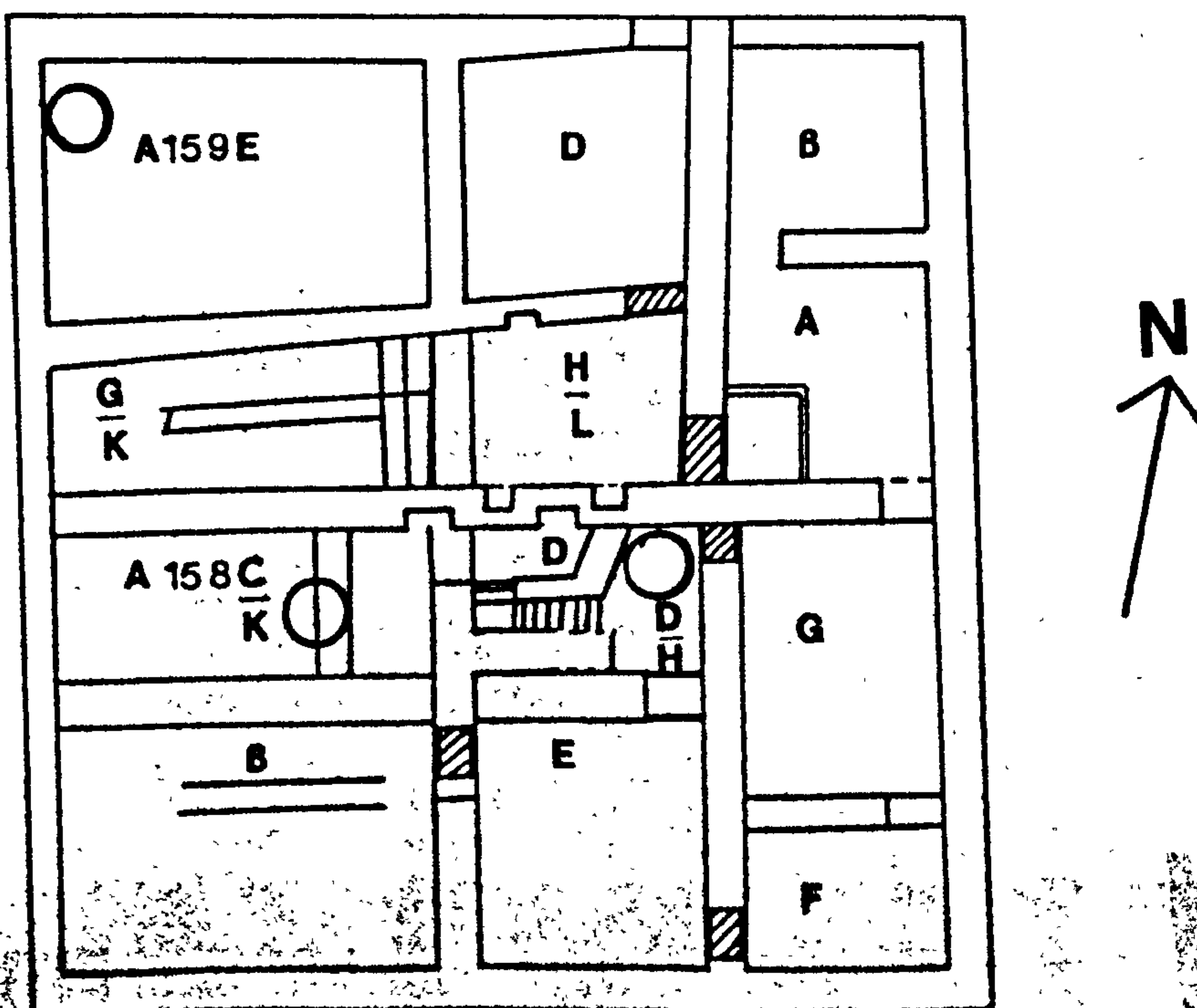
Plan LIII. House C89 at Karanis. (1:200)



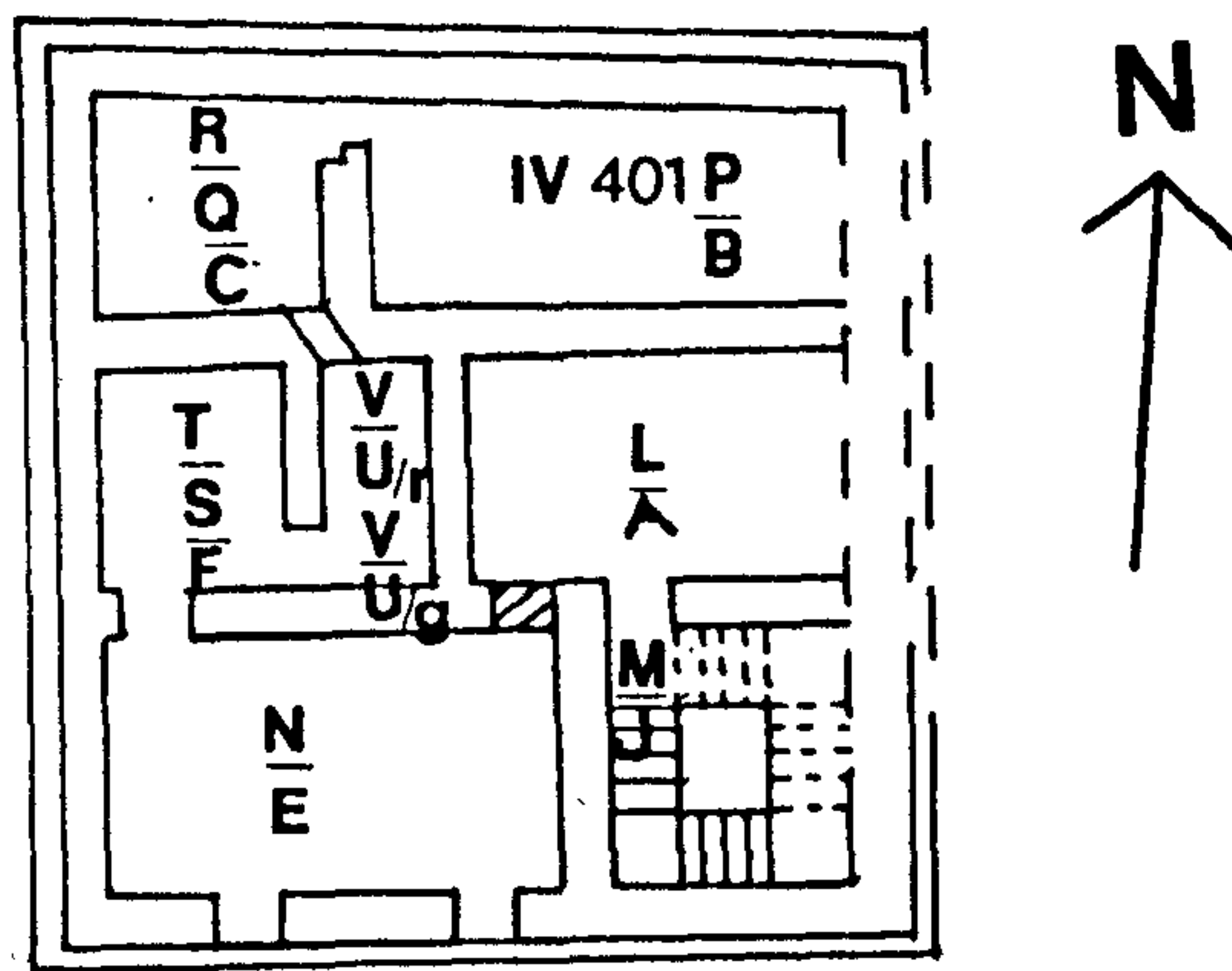
Plan LIV. Houses B197 & 198 at Karanis. (1:200)



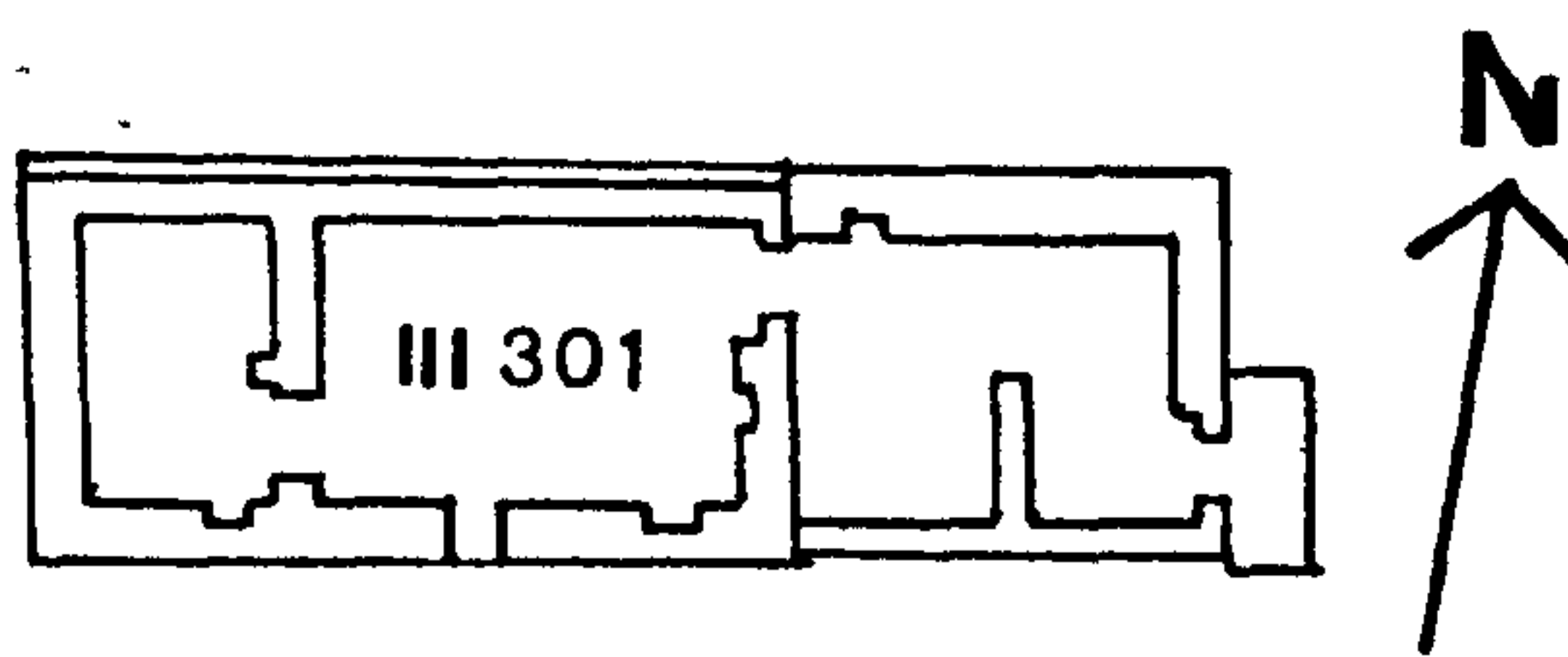
Plan LV. Houses A100 & 101 at Karanis. (1:200)



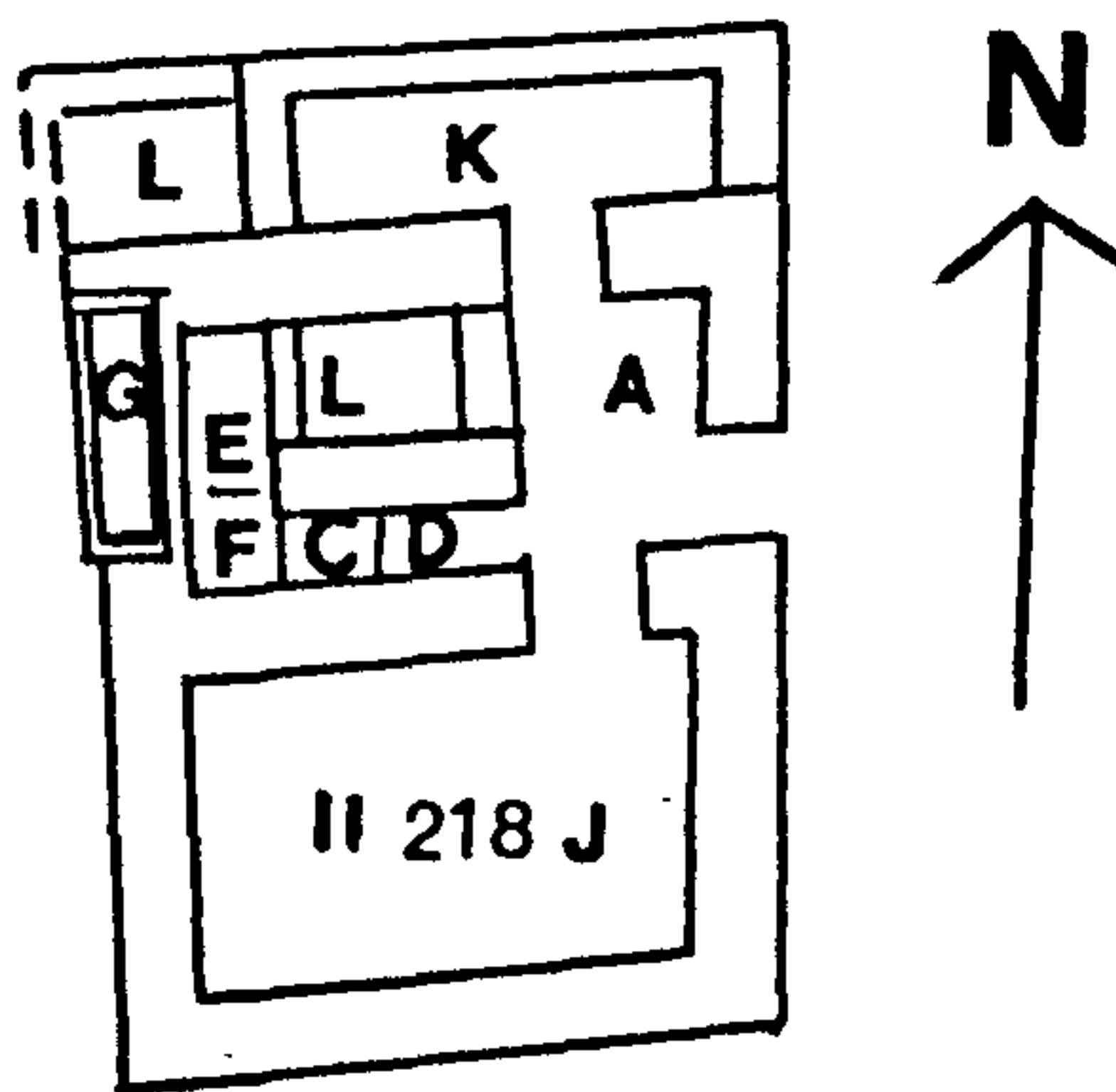
Plan LVI. Houses A158 & 159 at Karanis. (1:200)



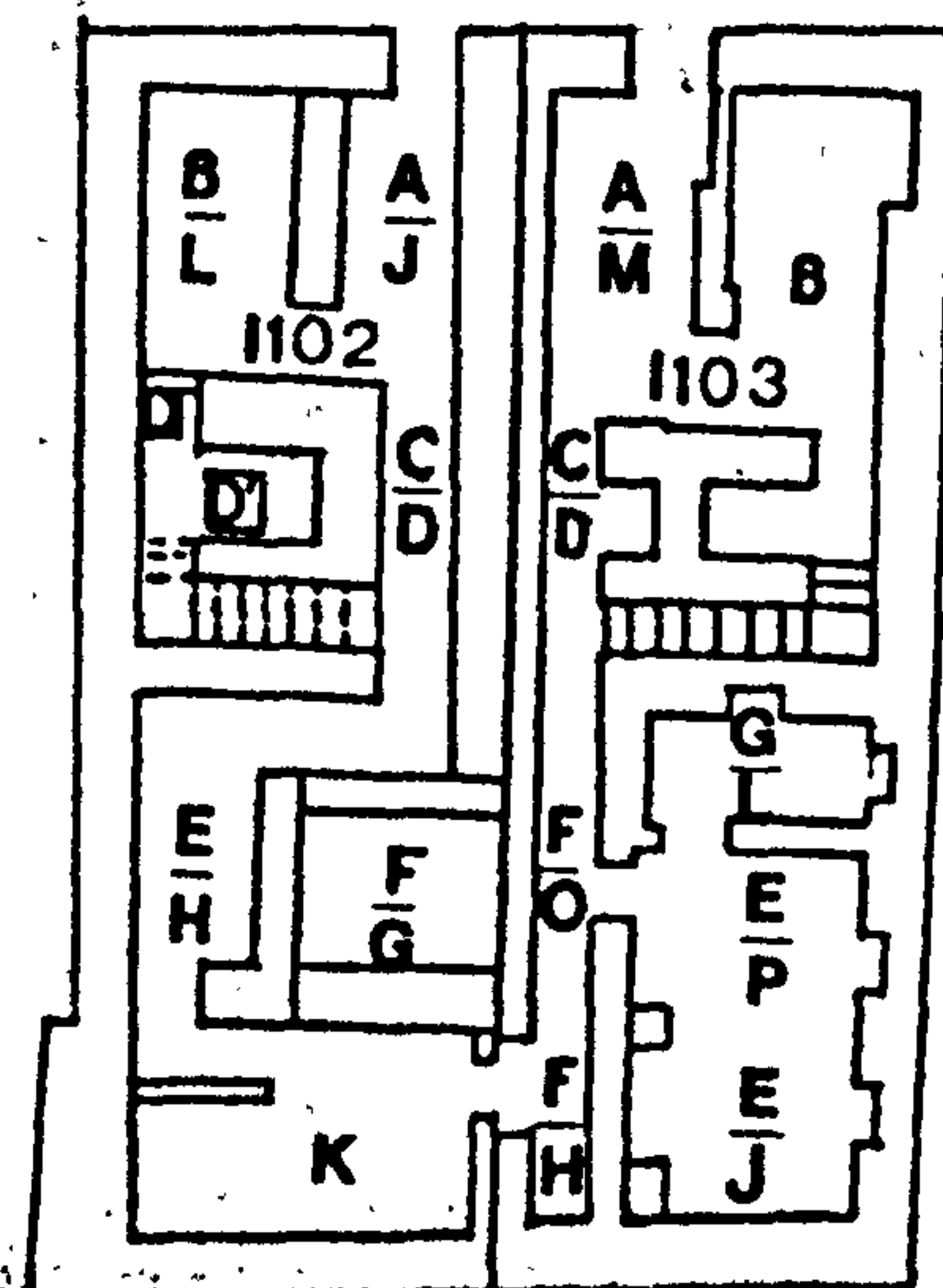
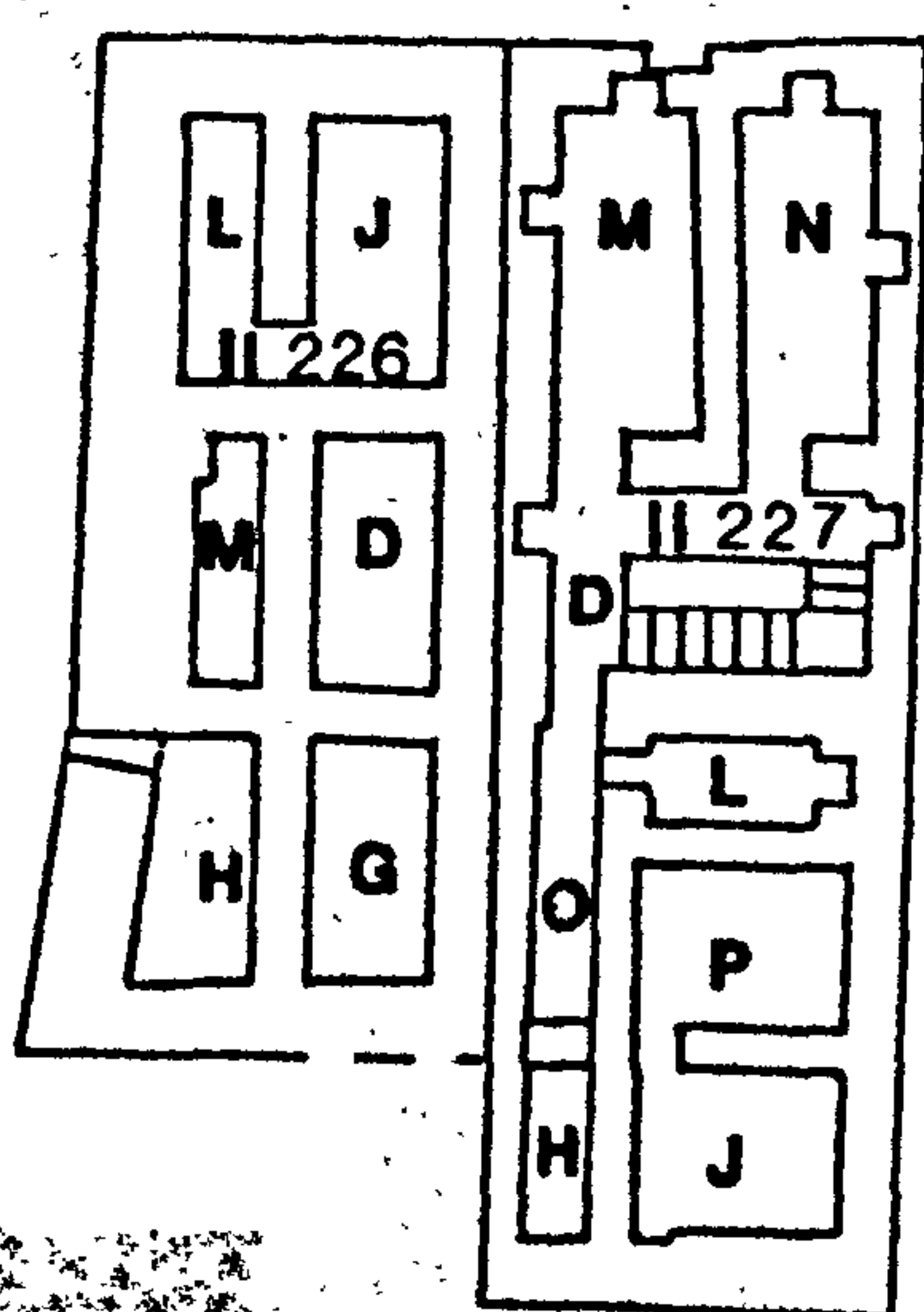
Plan LVII. House IV 401 at Soknopaïou Nesos. (1:20)



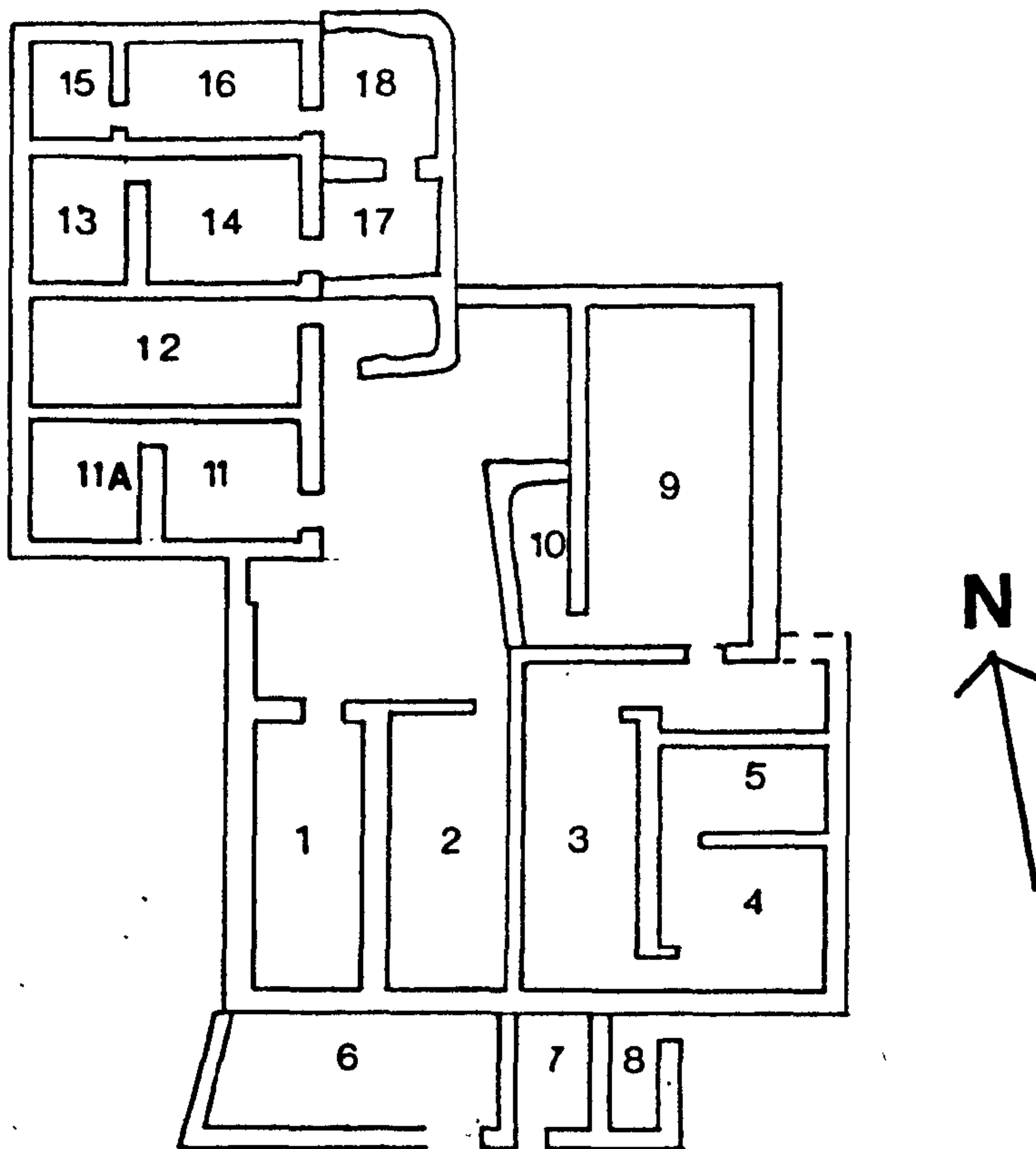
Plan LVIII. House III 301 at Soknopaïou Nesos. (1:200)



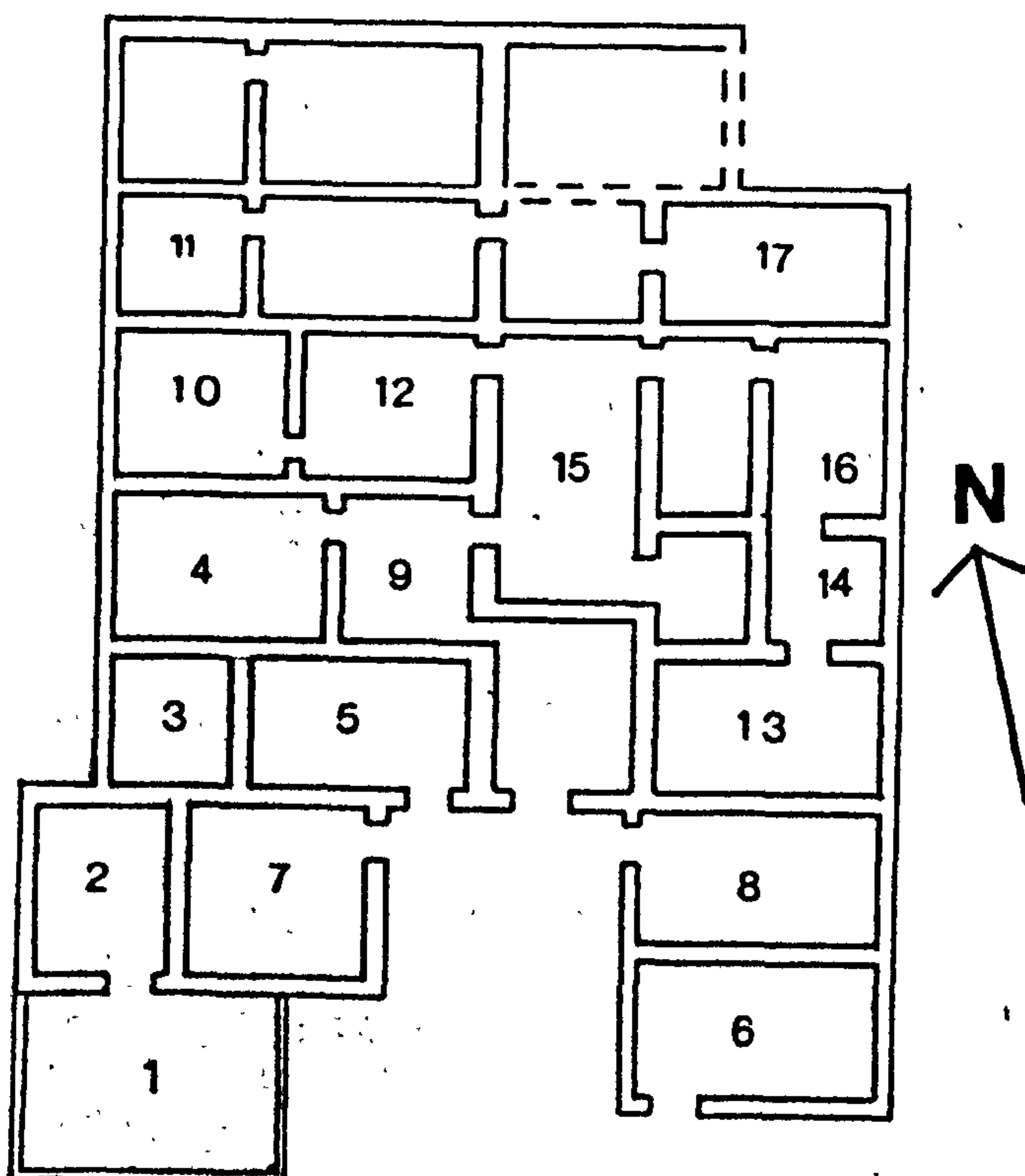
Plan LIX. House II 218 at Soknopaïou Nesos. (1:200)



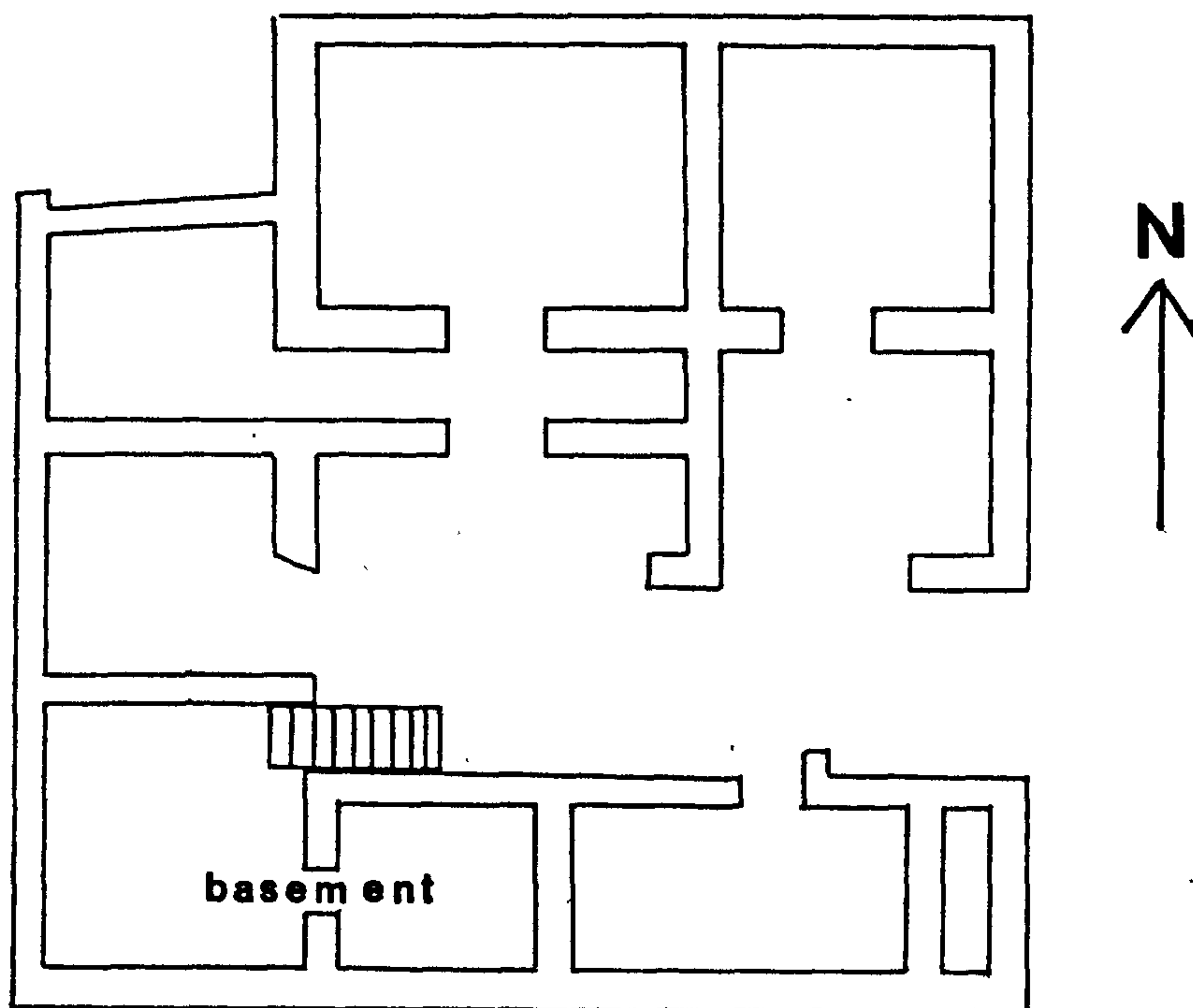
Plan LX. Houses II 226 & 227 and I 102 & 103 at Soknopaïou Nesos. (1:200)



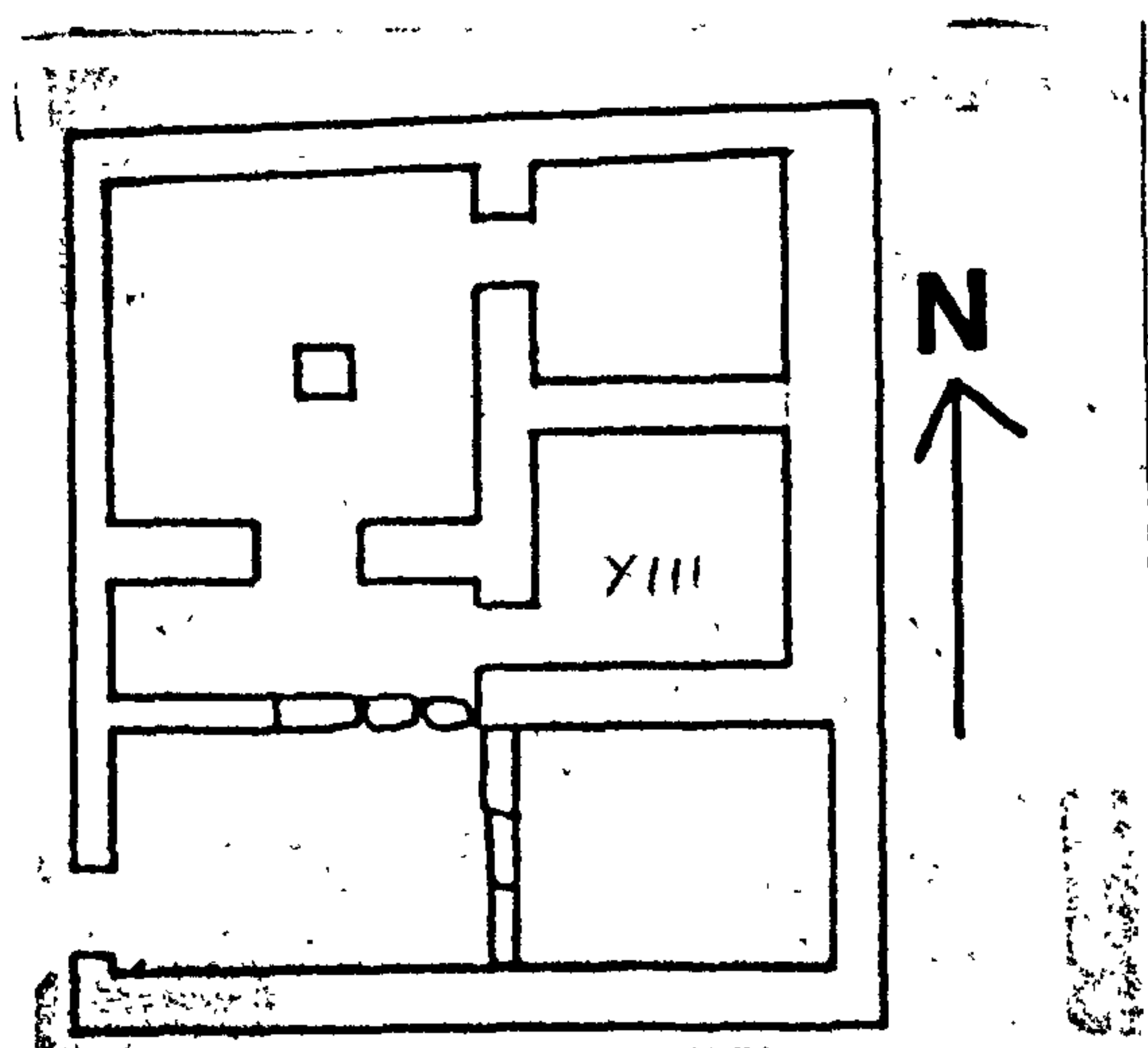
Plan LXI. House 1 from The Desert Fayyum. (1:200)



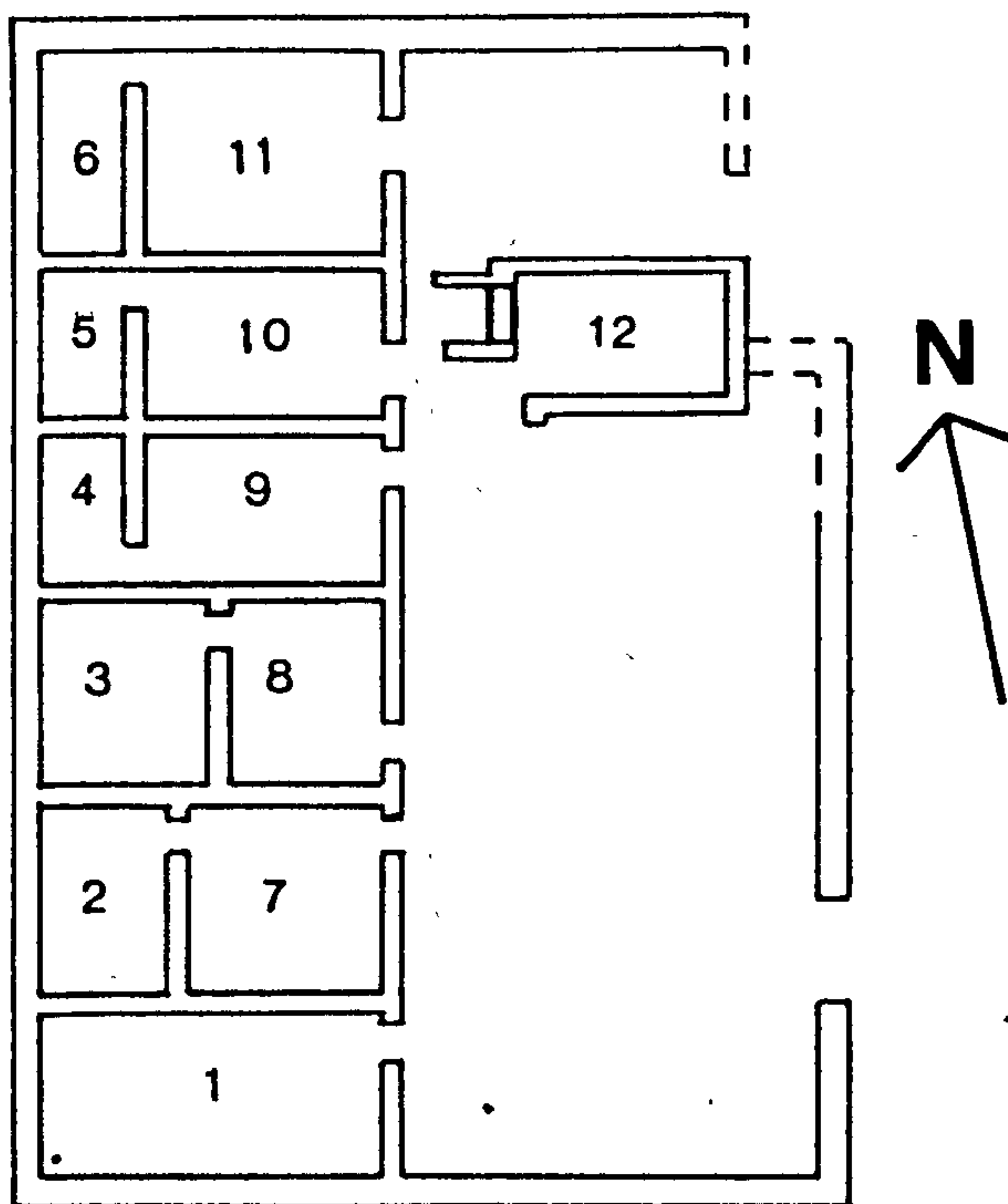
Plan LXII. House 3 from The Desert Fayyum. (1:200)



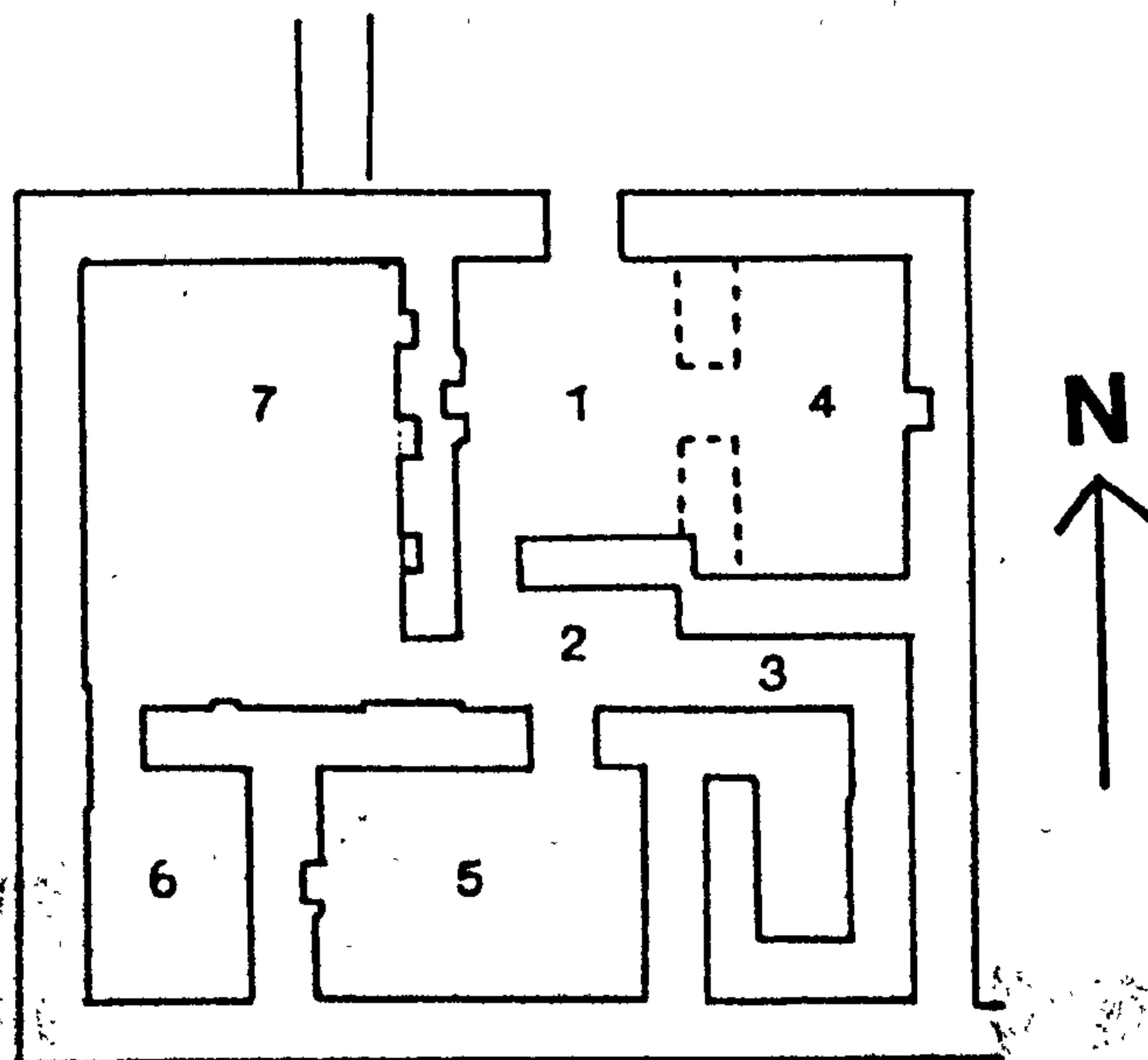
Plan LXIII. House XXXV from Priene. (1:200)



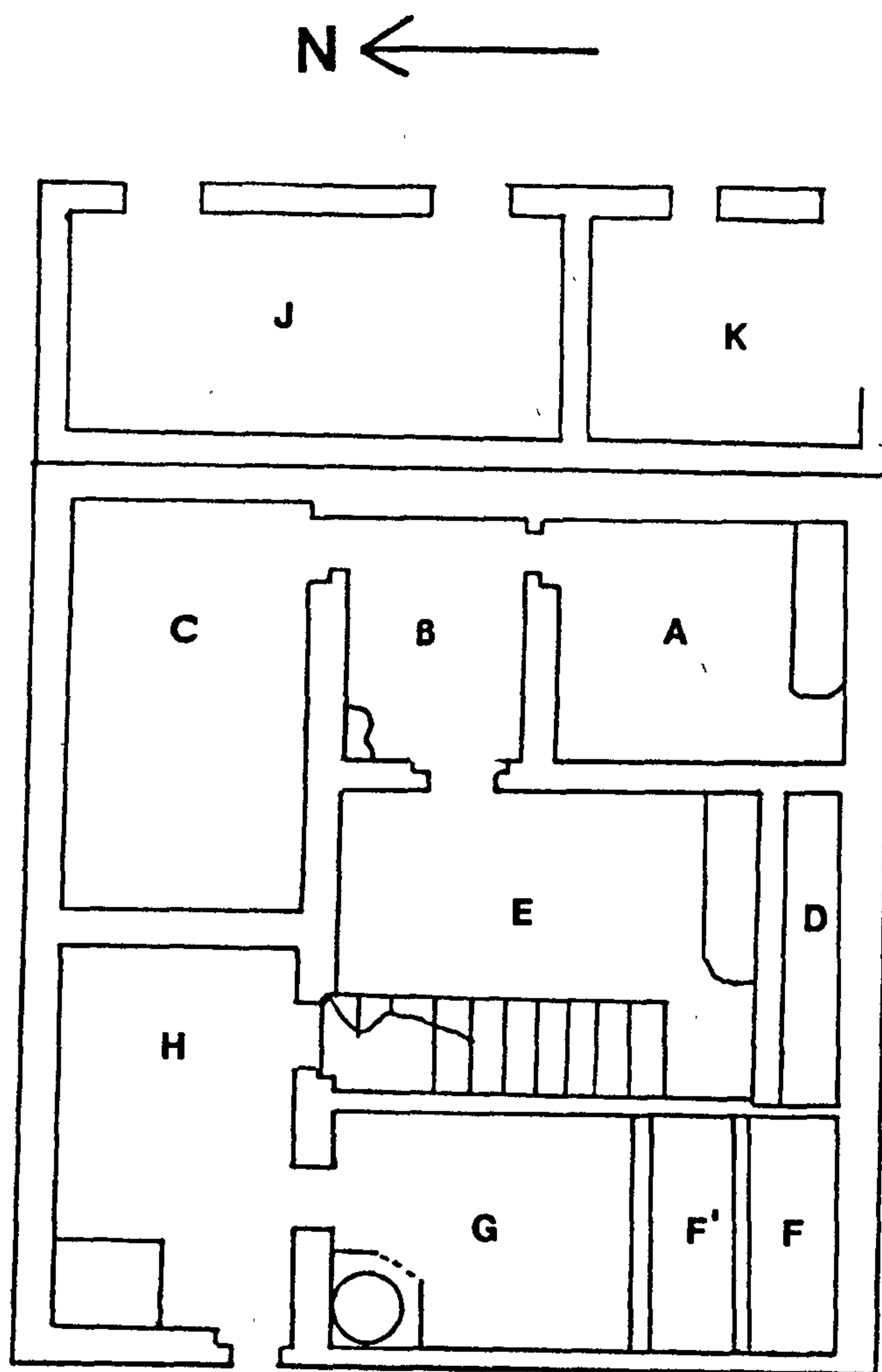
Plan LXIV. House XIII from Priene. (1:200)



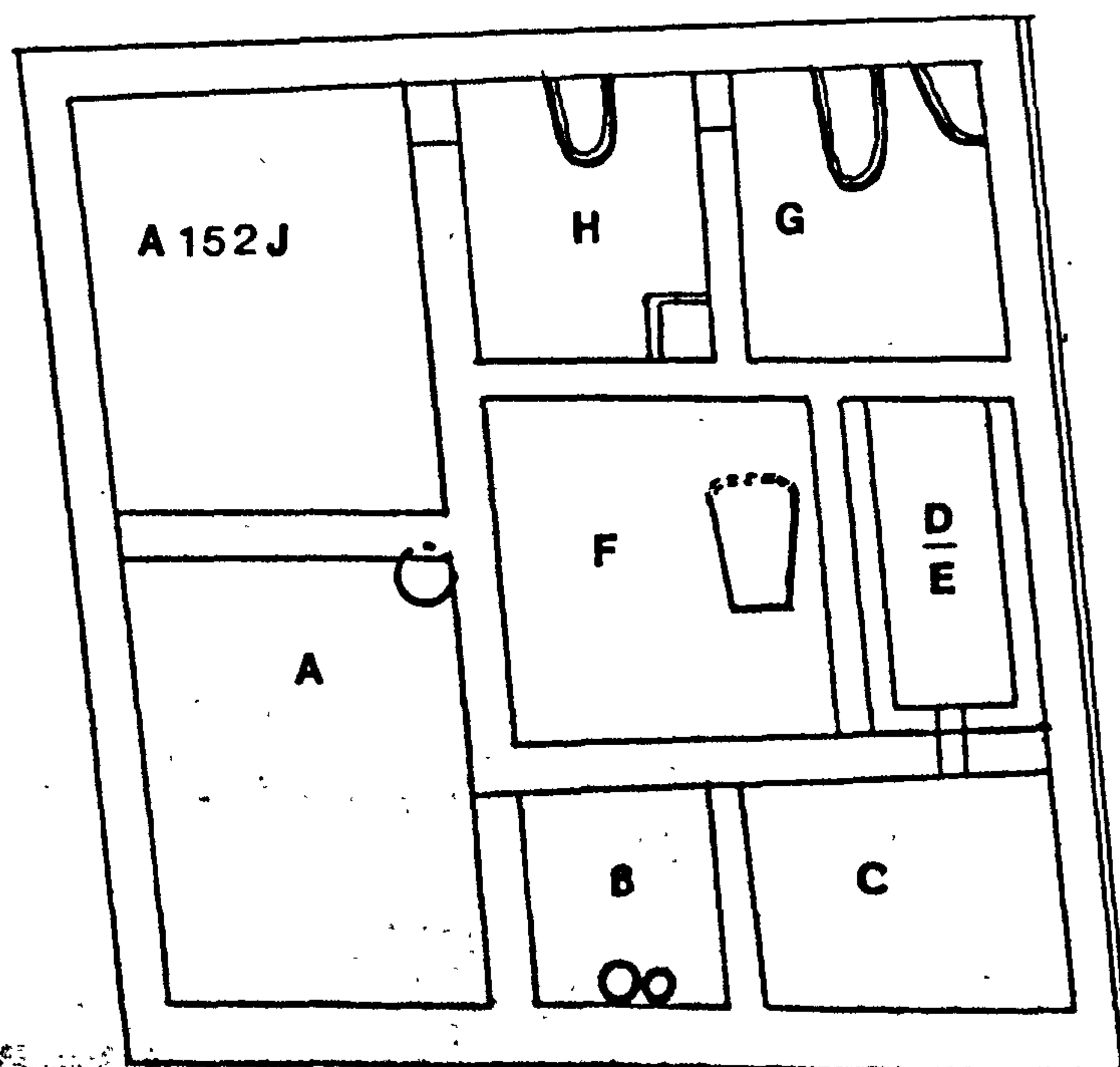
Plan LXV. House 2 from The Desert Fayyum. (1:200)



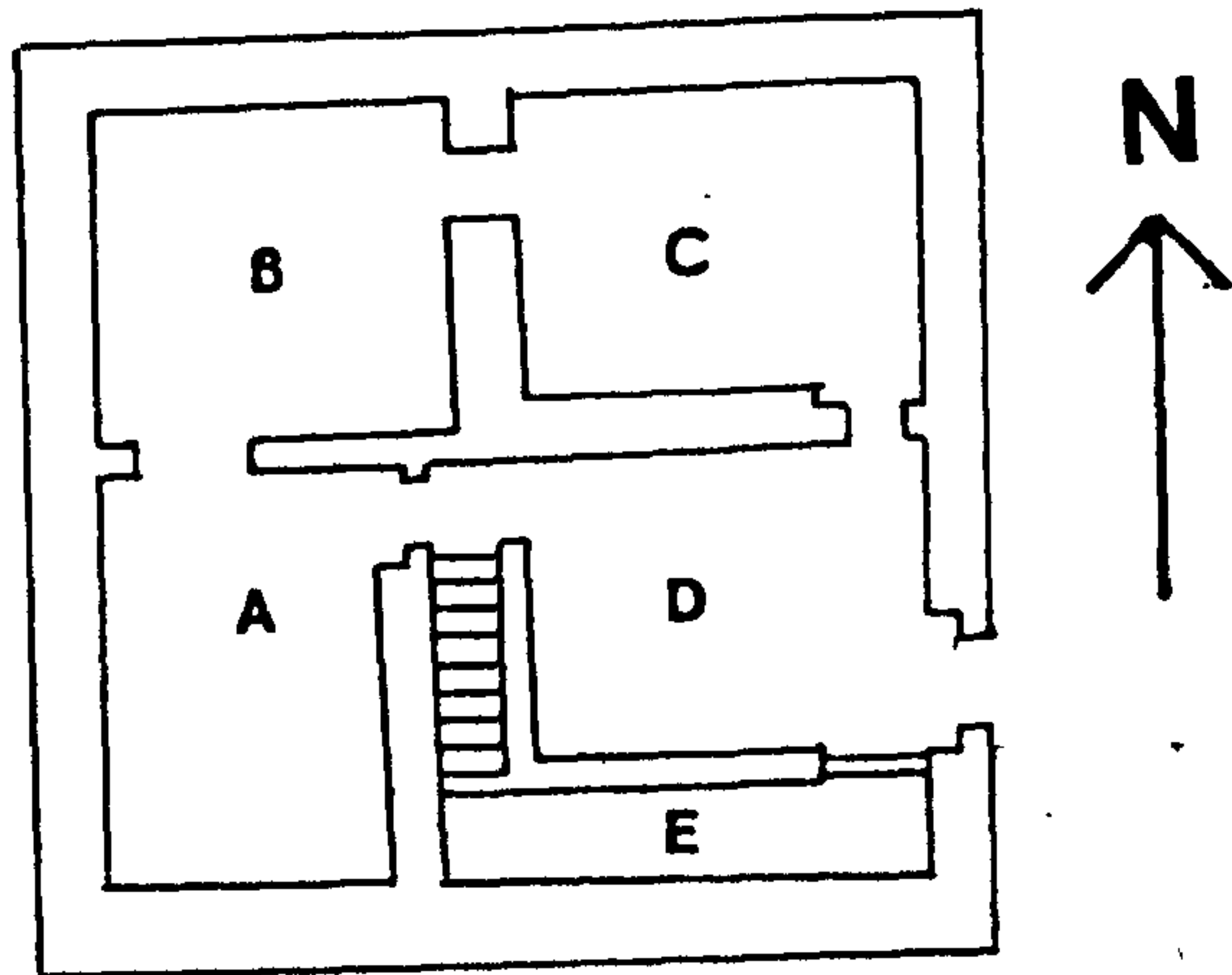
Plan LXVI. D6 from Philadelphia. (1:200)



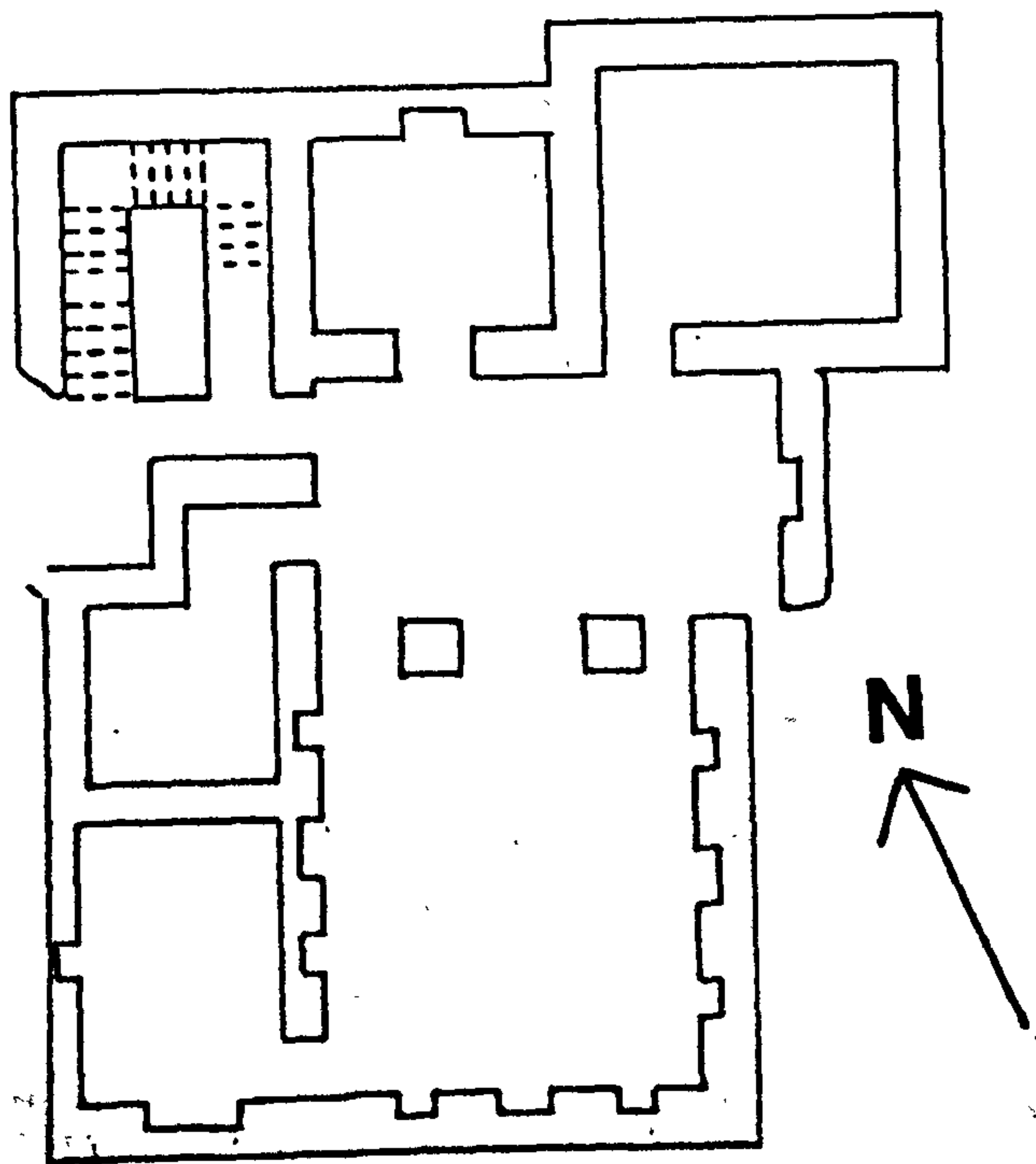
Plan LXVII. House 1 from Medinet Ghoran. (1:200)



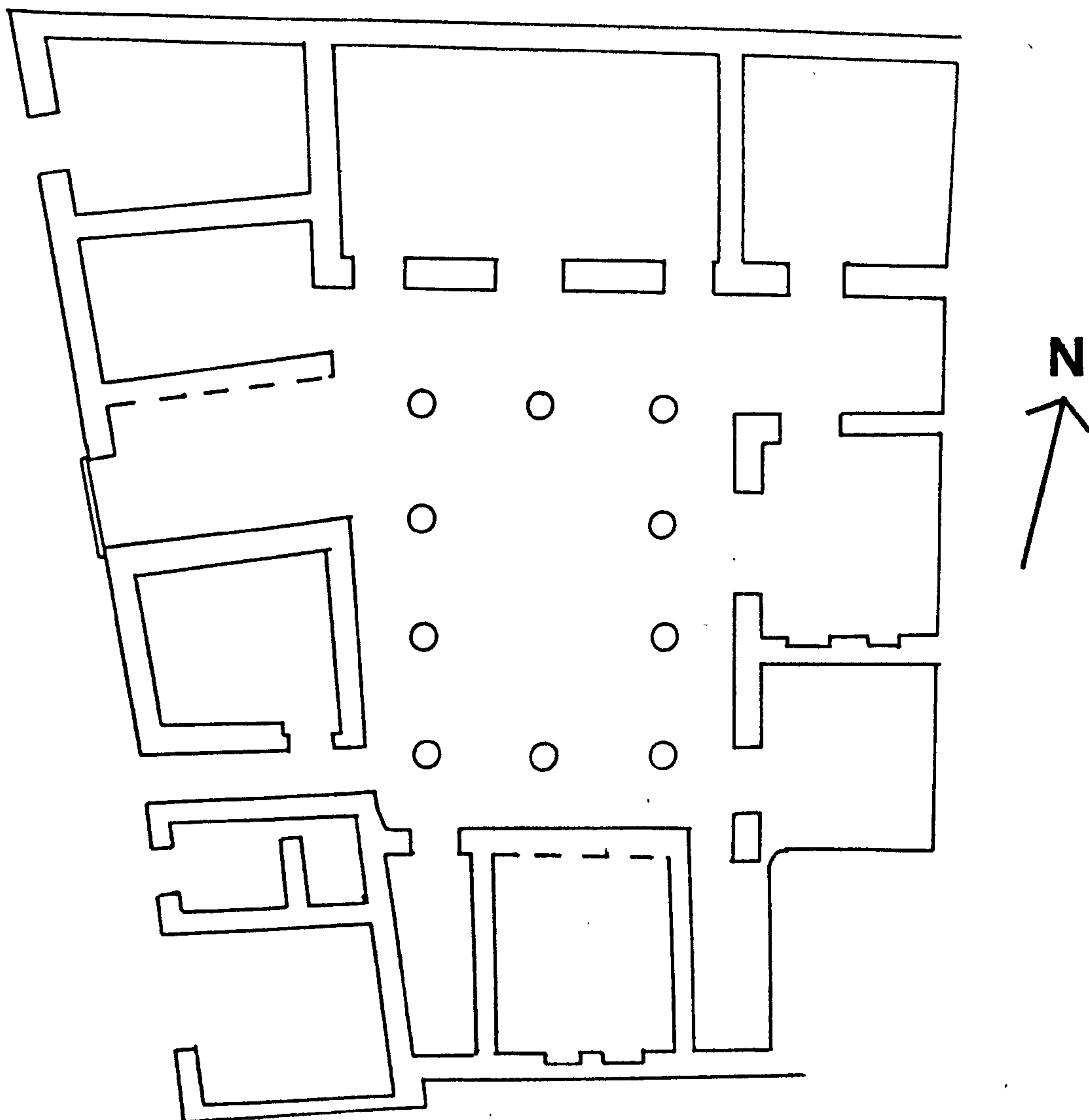
Plan LXVIII. House A152 from Karanis. (1:200)



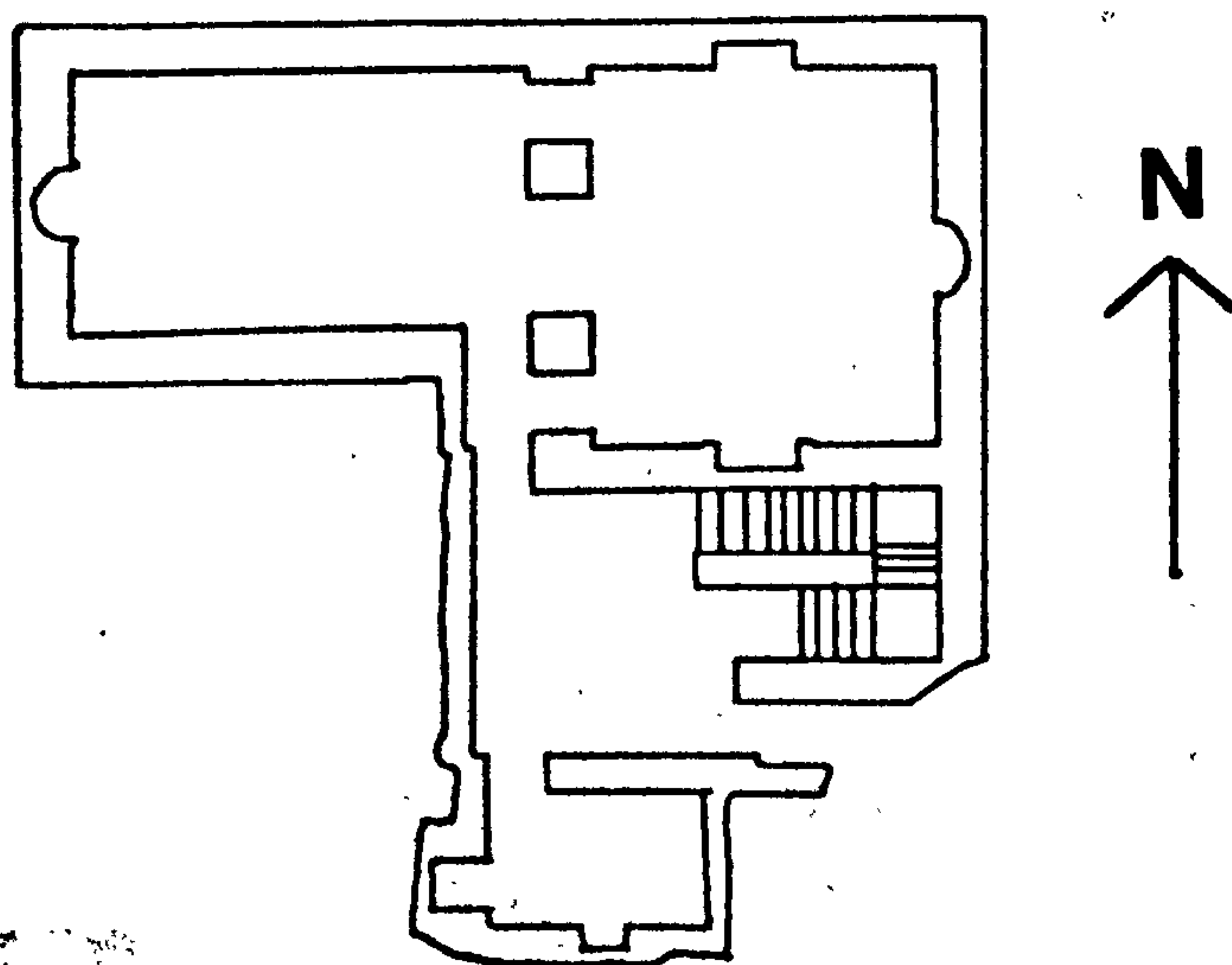
Plan LXIX. House 2 from Medinet Ghoran. (1:200)



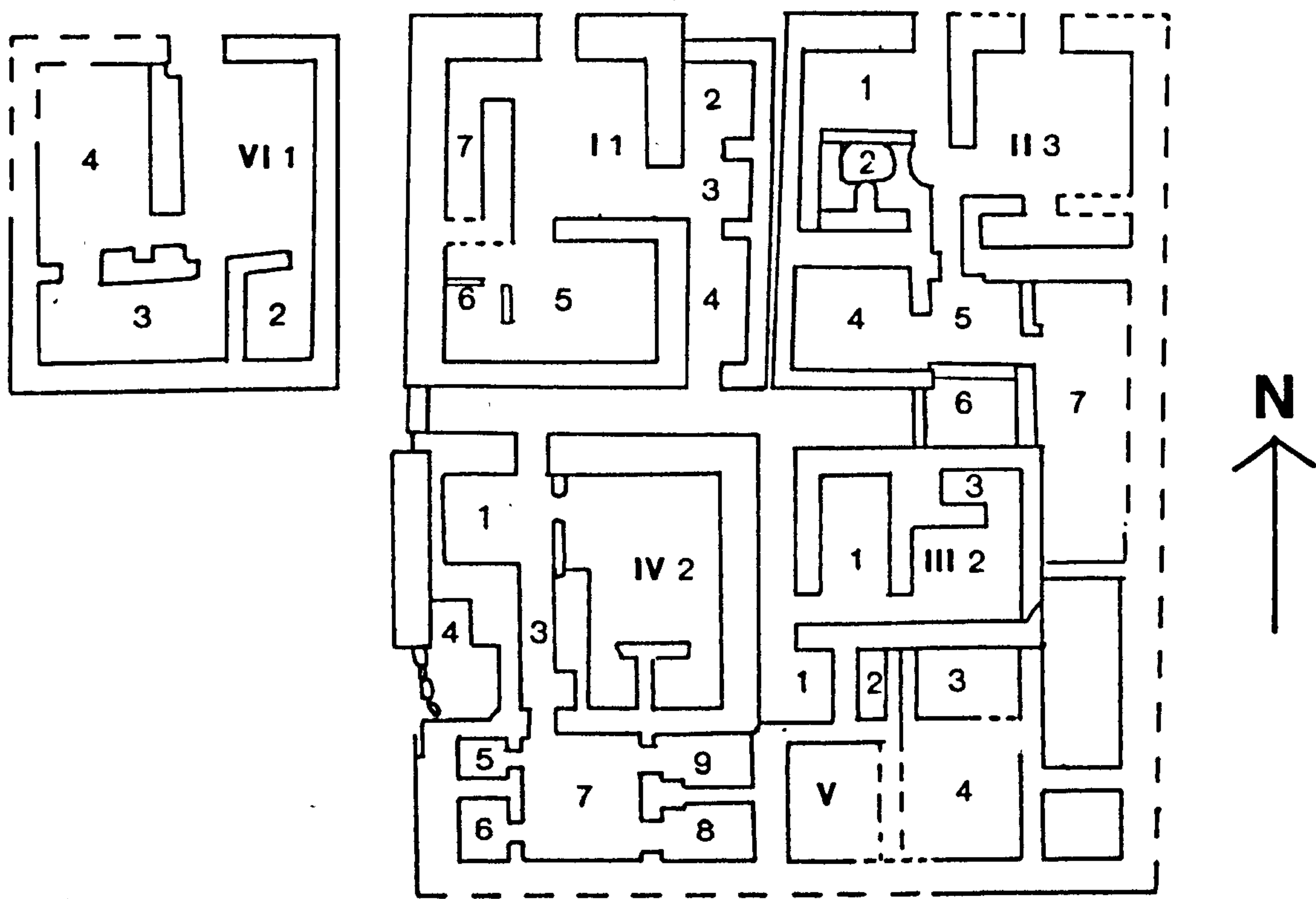
Plan LXX. House 2 from Theadelphia. (1:200)



Plan LXXI. 'Maison du Dionysios' from Delos. (1:200)



Plan LXXII. House 1 from Theadelphia. (1:200)



Plan LXXIII. Insula from Dionysias. (1:200)

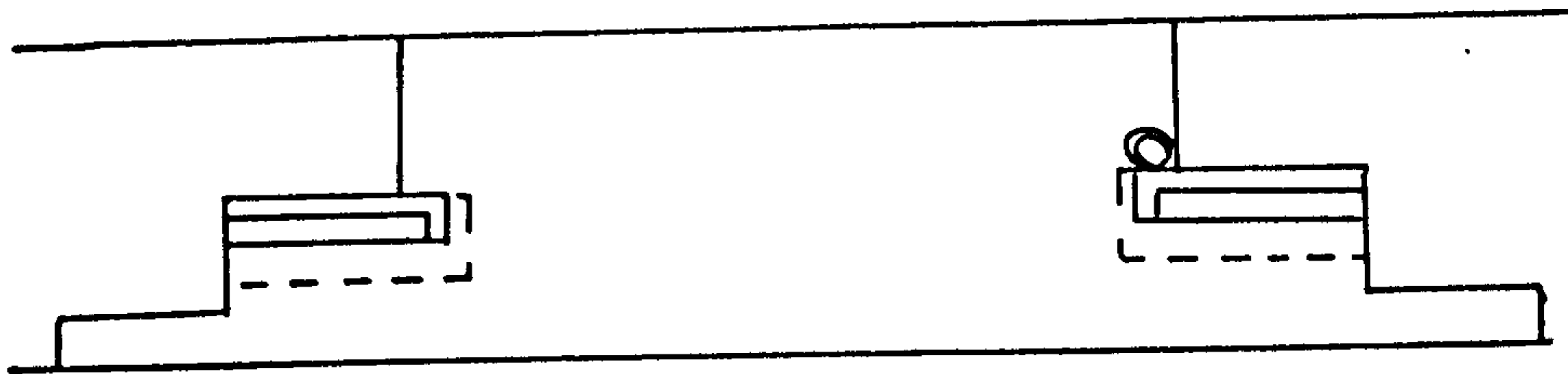


Figure 1. Plan of jambs and threshold at Deir el-Medina.

(After Bruyere (1939) fig. 14)

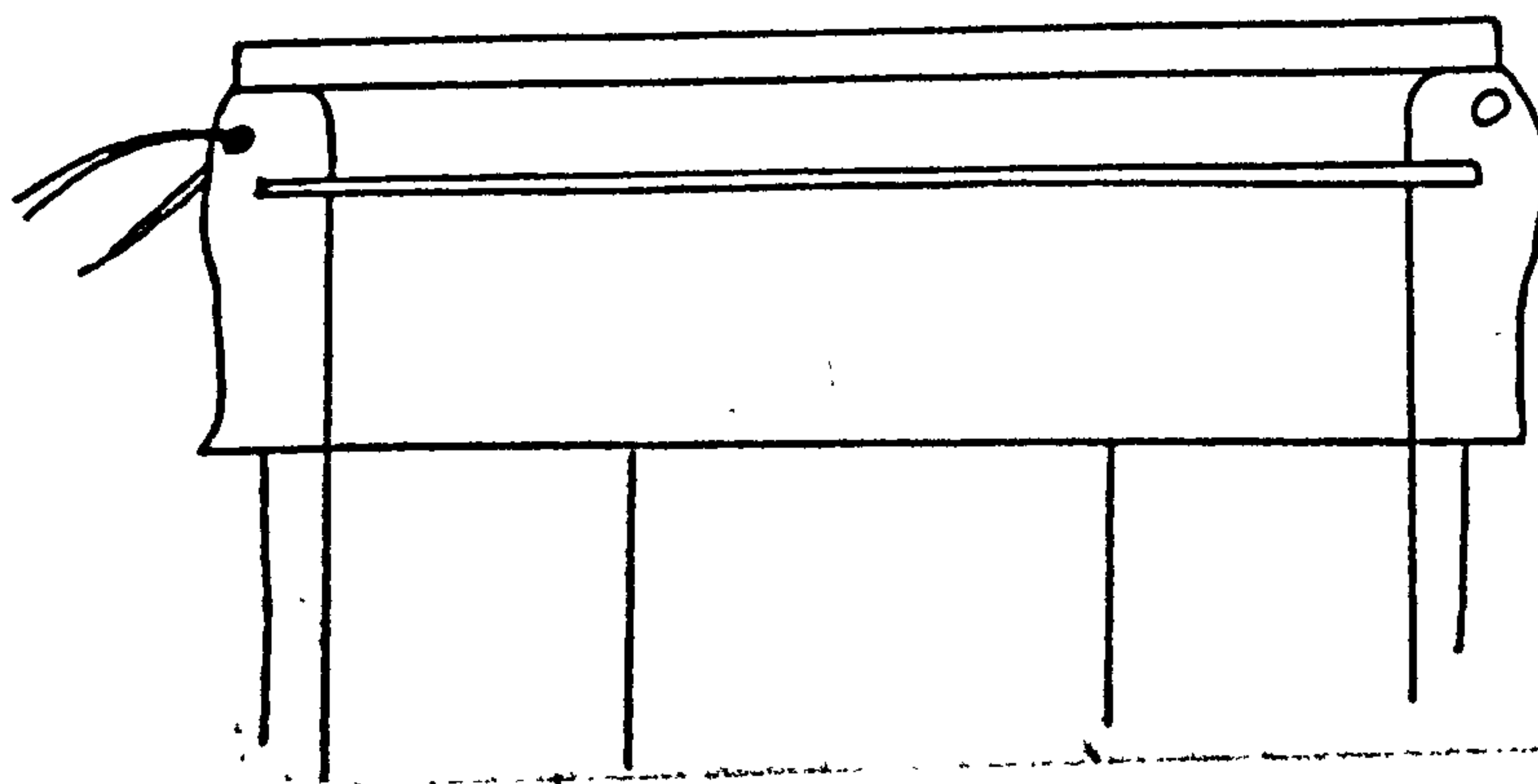


Figure 2. The method of tying the lintel into the brickwork

at Medinet Habu.

(After Hölscher (1951) fig. 30)

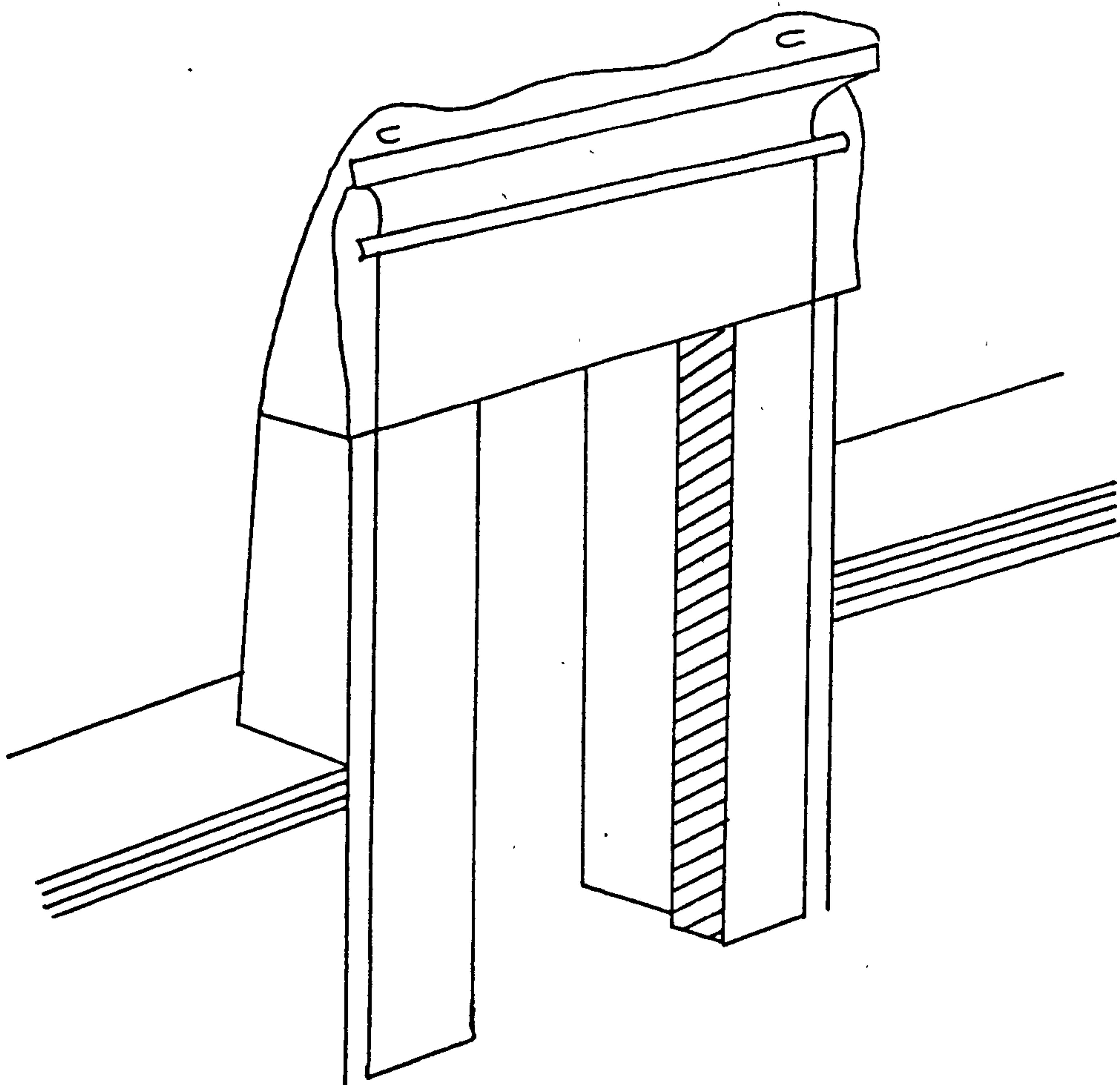


Figure 3. The lintel at Medinet Habu.
(After Hölscher (1951) fig. 30)

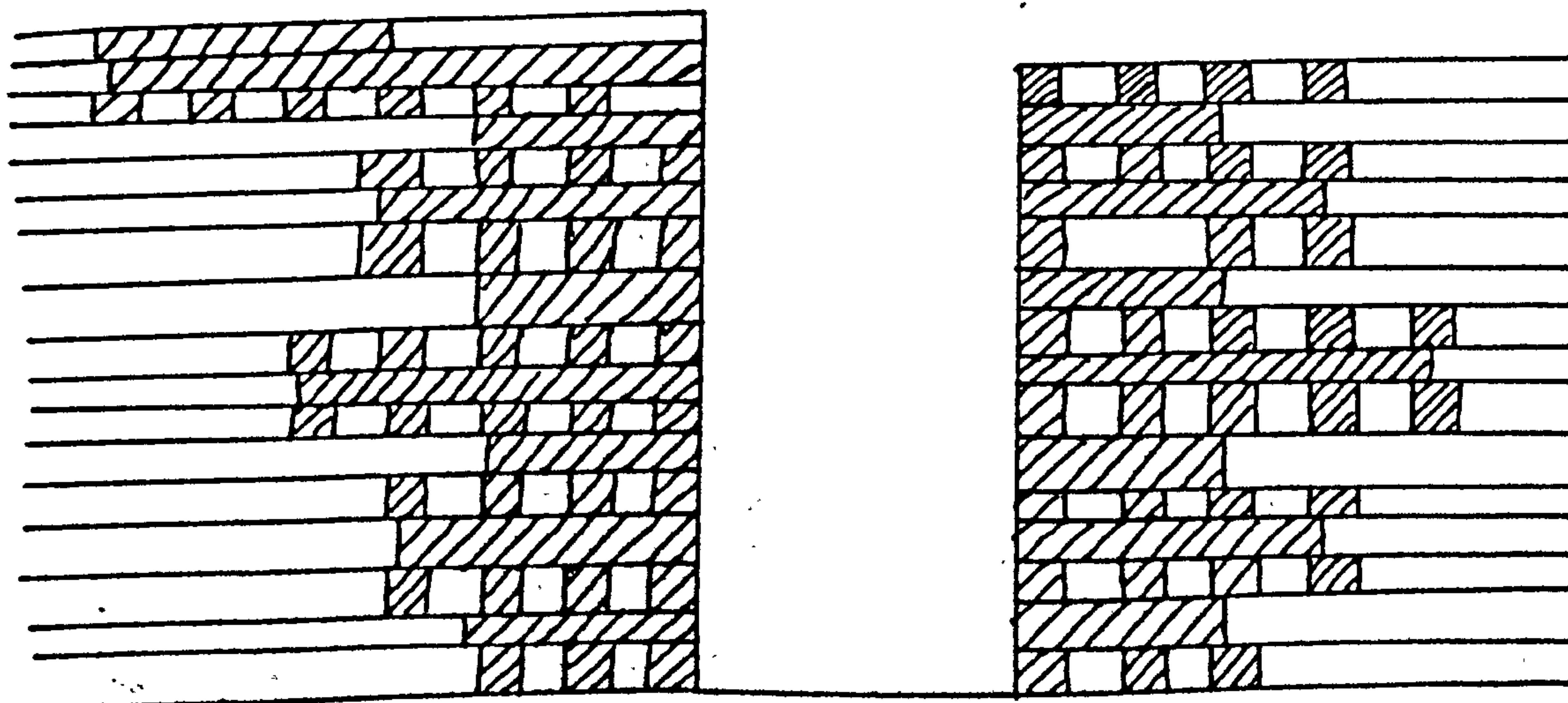


Figure 4. Doorway of house I 112 at Soknopaiou Nesos.
(After Boak (1935) fig. 14)

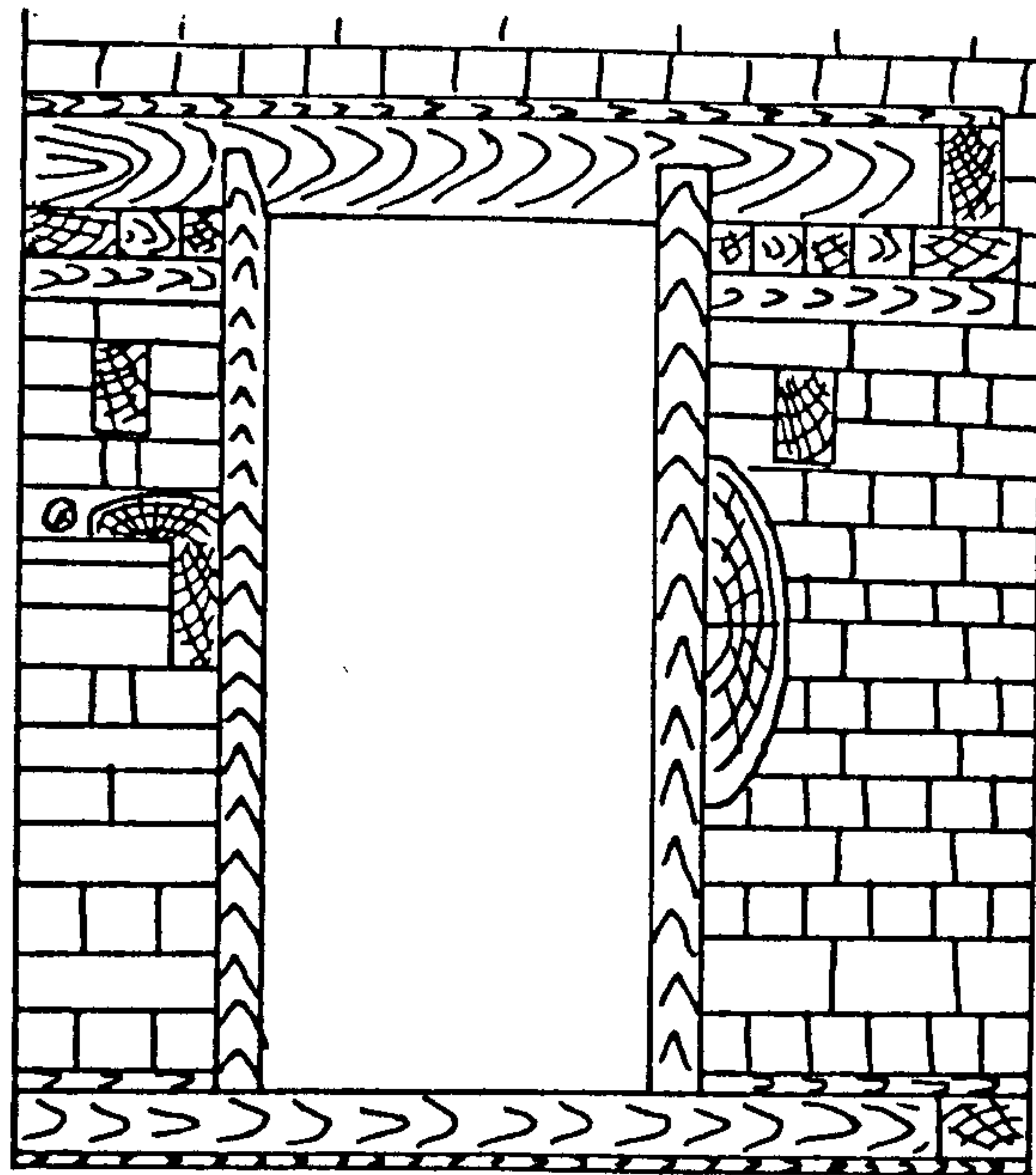


Figure 5. Doorway of house C 50 at Karanis.
(after Husselman (1979) plan 13)

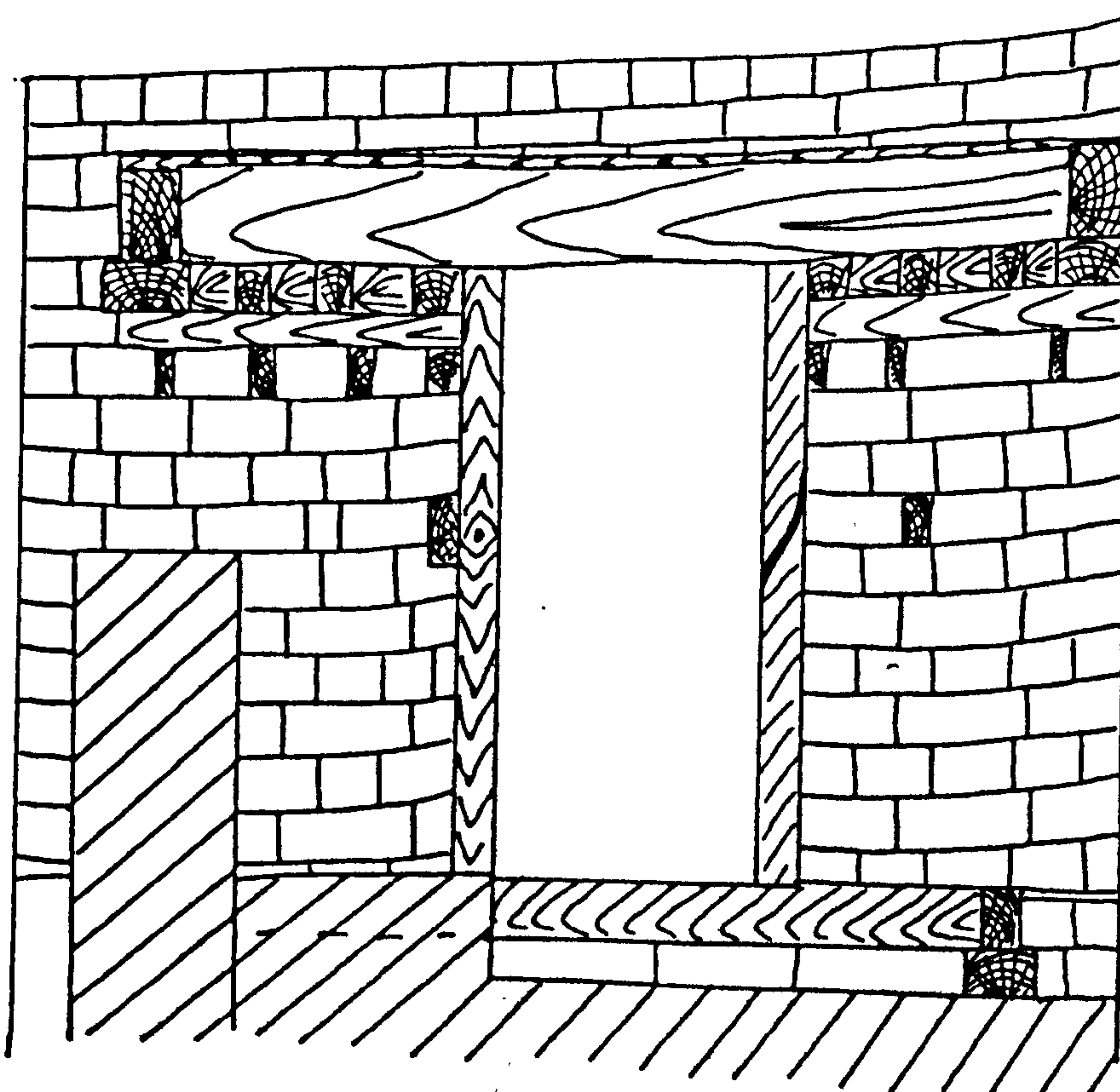


Figure 6. Doorway of house C68 at Karanis.
(After Husselman (1979) plan 12)

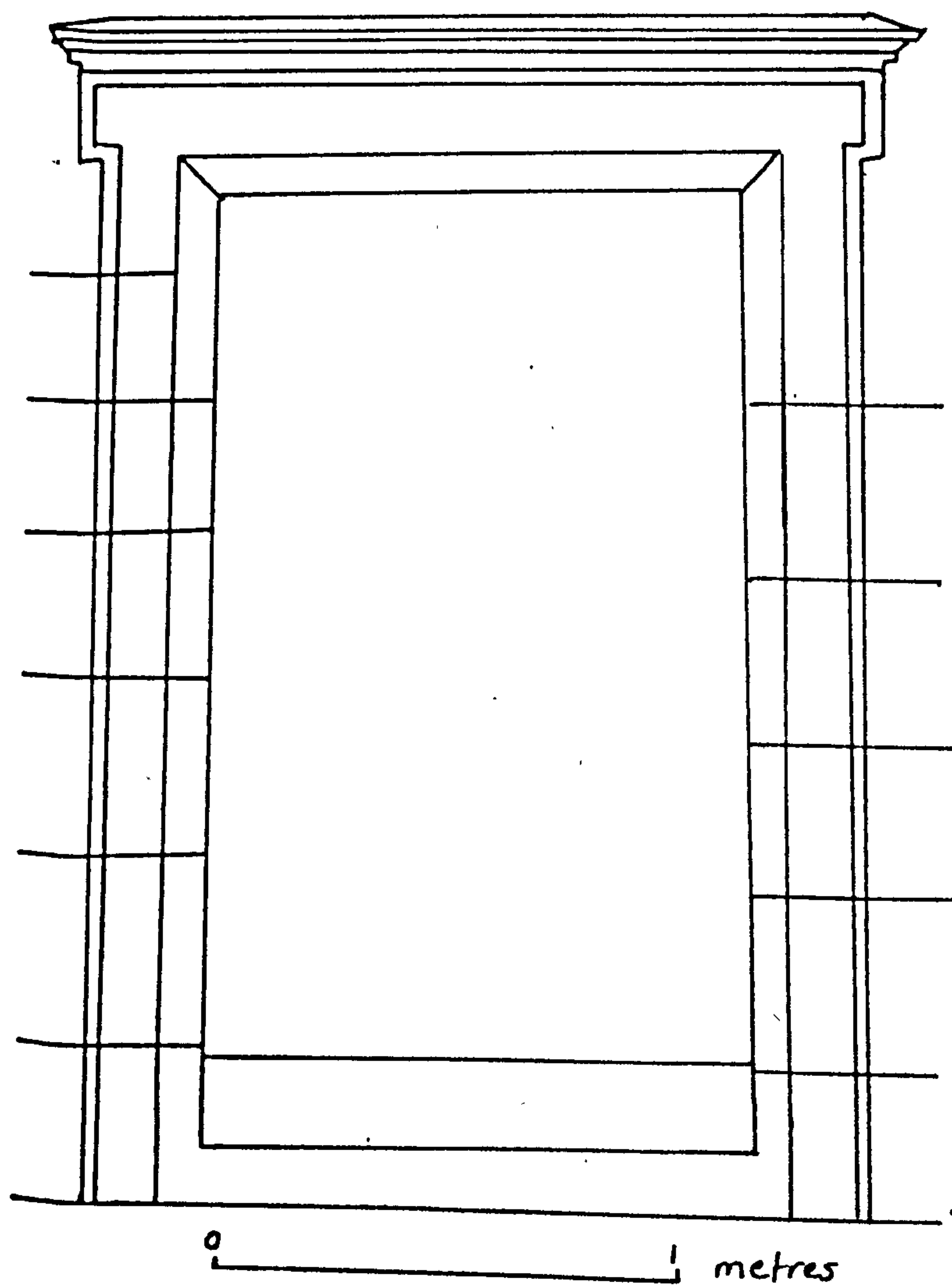


Figure 7. Doorway into tomb 2 at Moustafa Pasha.
(After Adriani (1936) fig. 41)

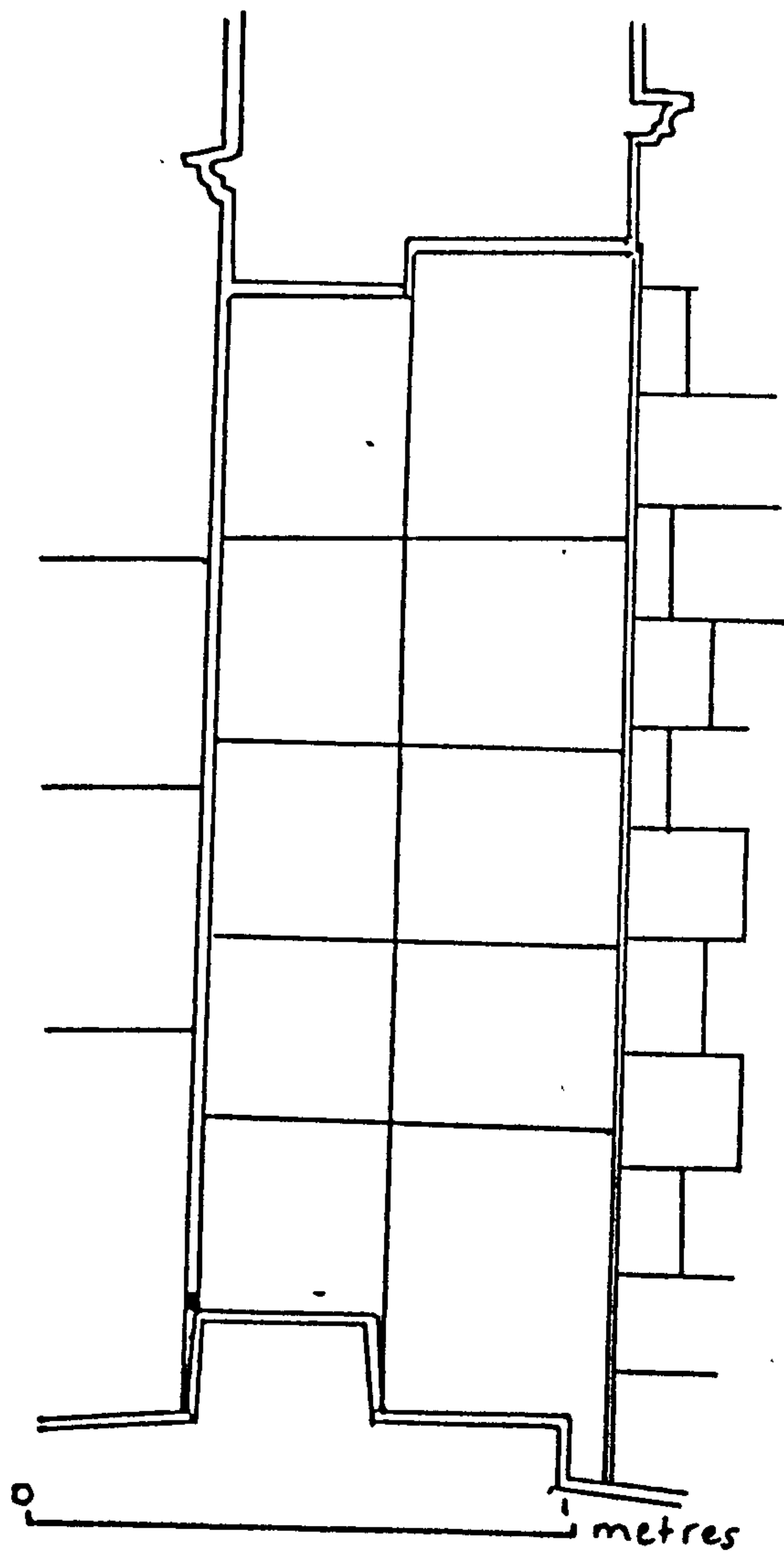


Figure 8. Section through doorway into tomb 2 at Moustafa Pasha.
(After Adriani (1936) fig. 21)

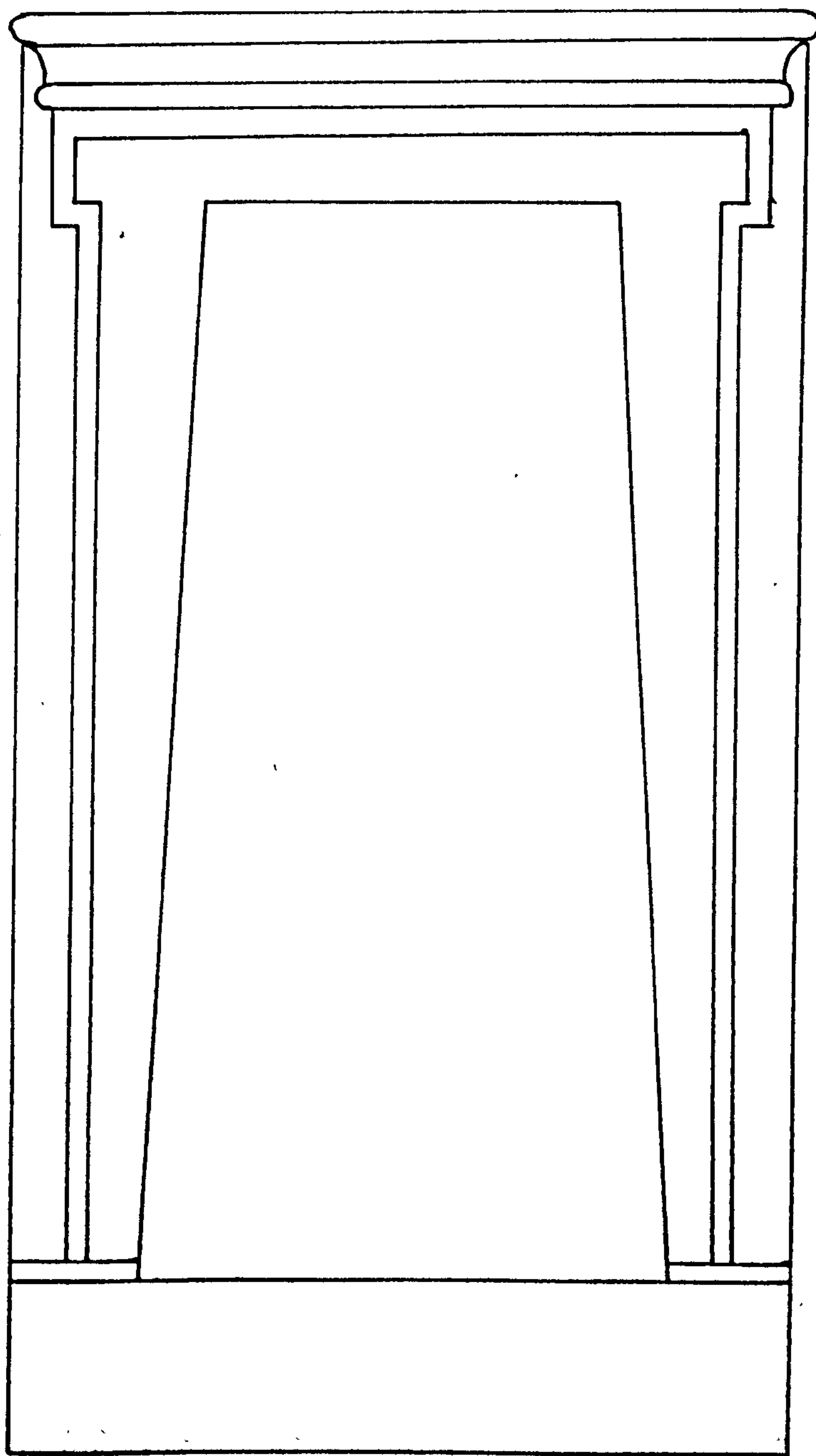
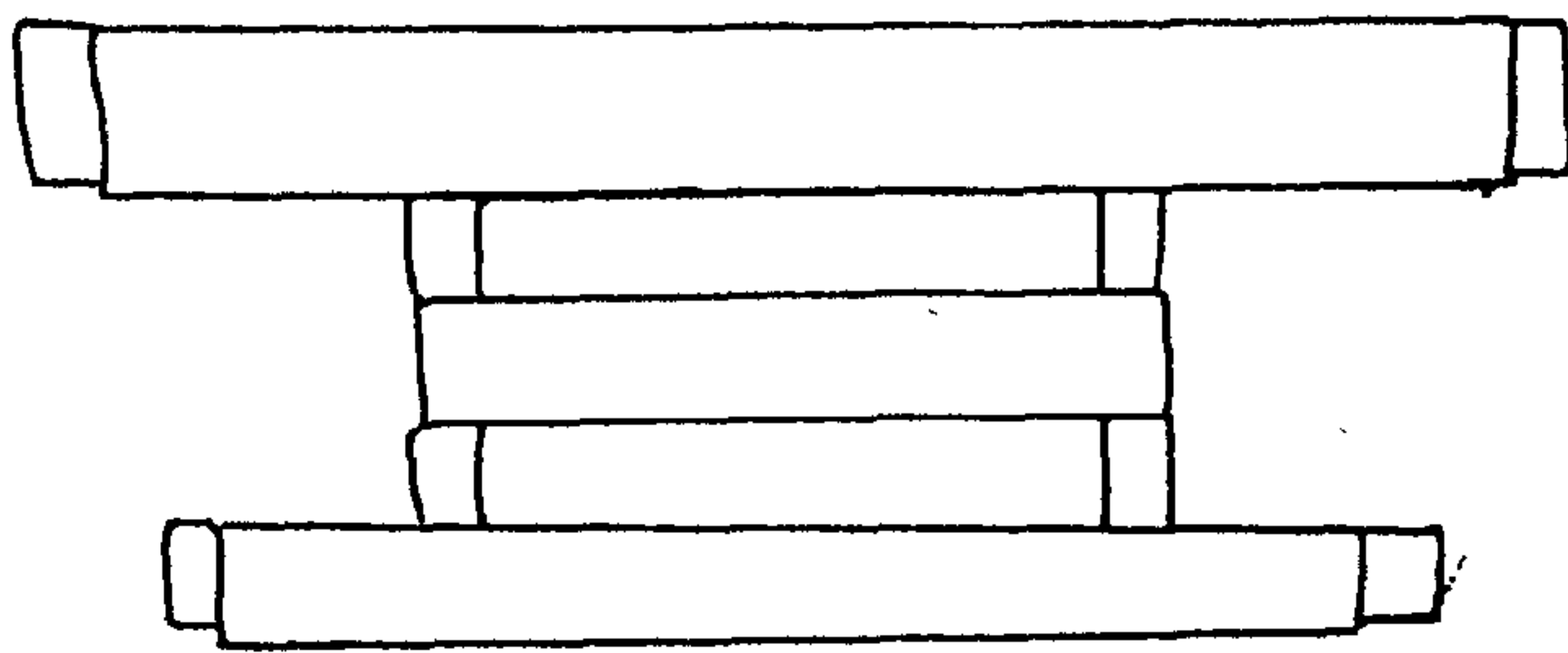
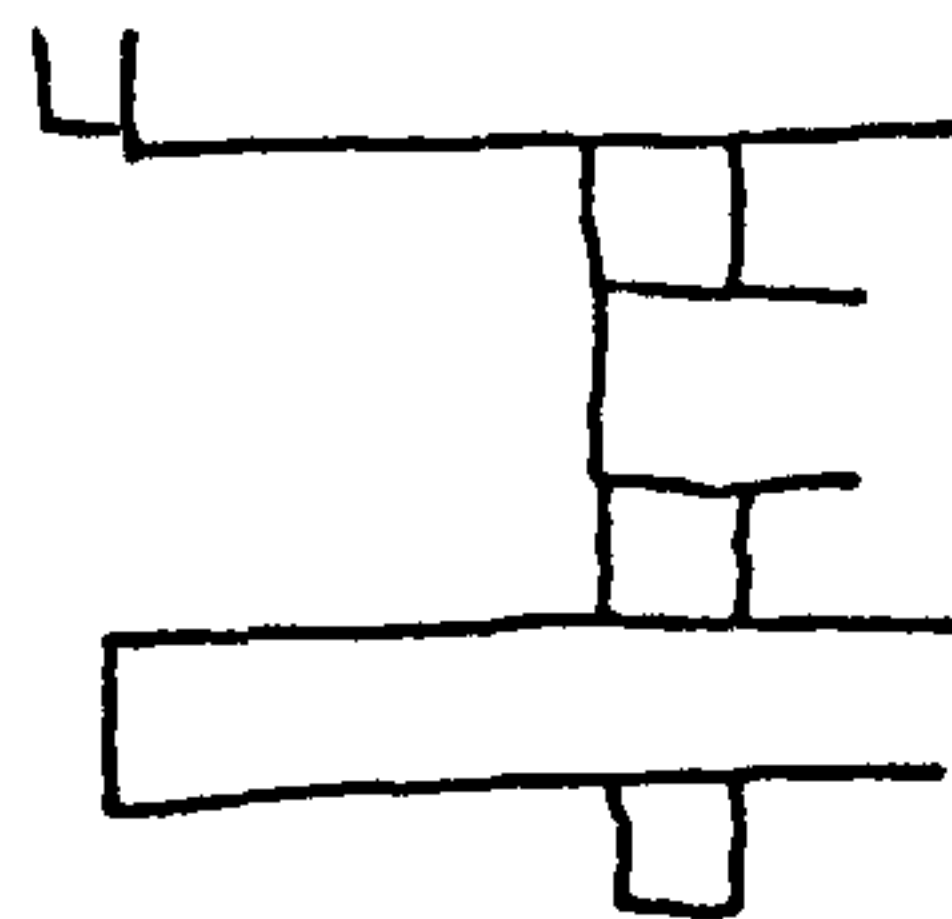


Figure 9. Doorway in house 1 at Medinet Ghoran.

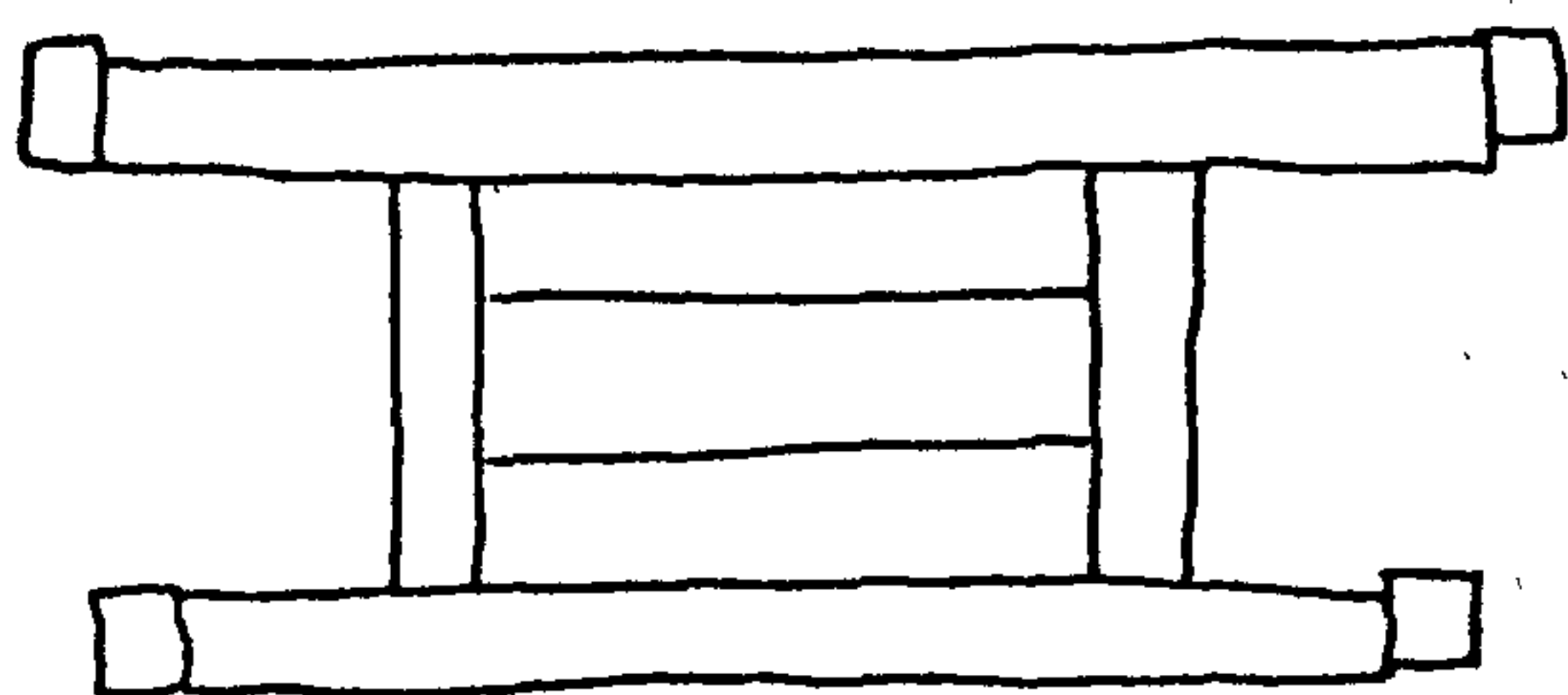
(After Jouguet (1901) fig. 7)



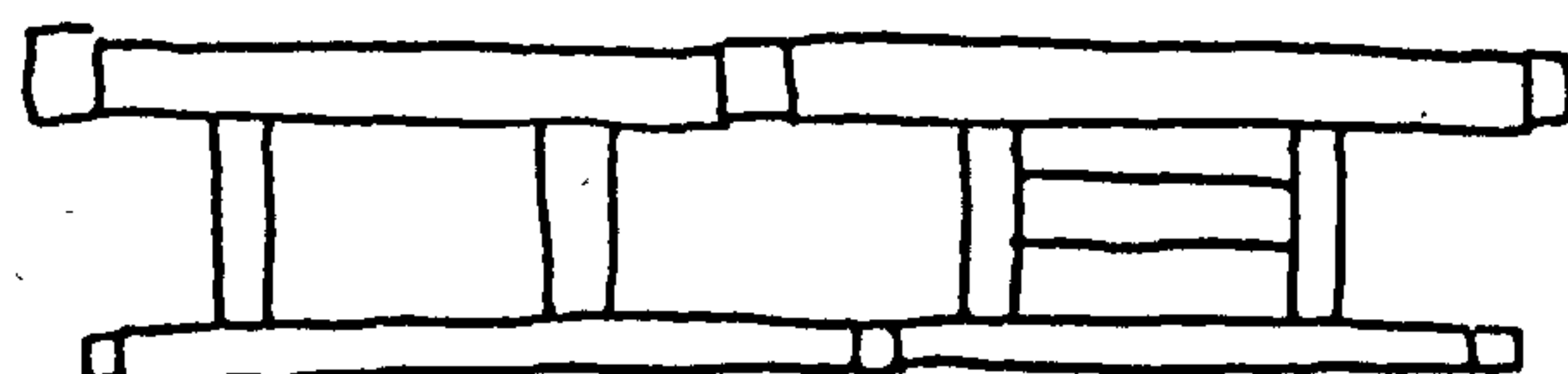
AI C35B



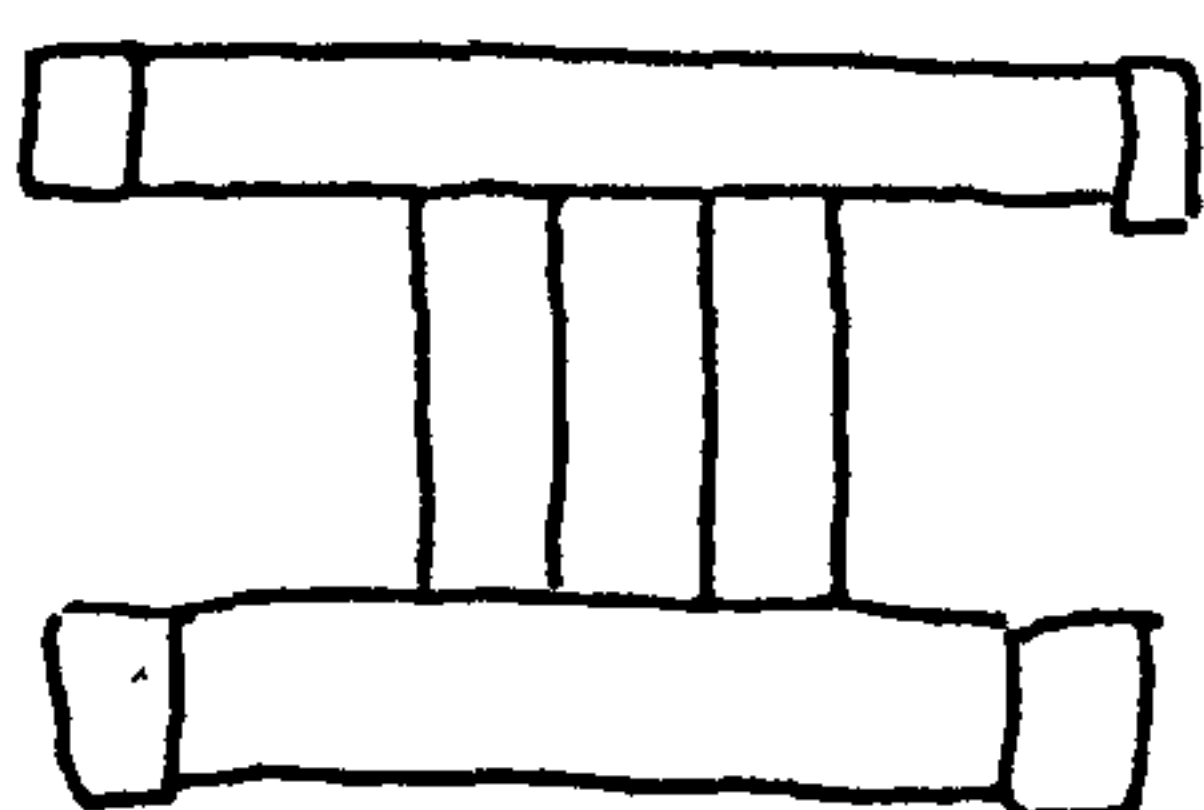
AIa C6



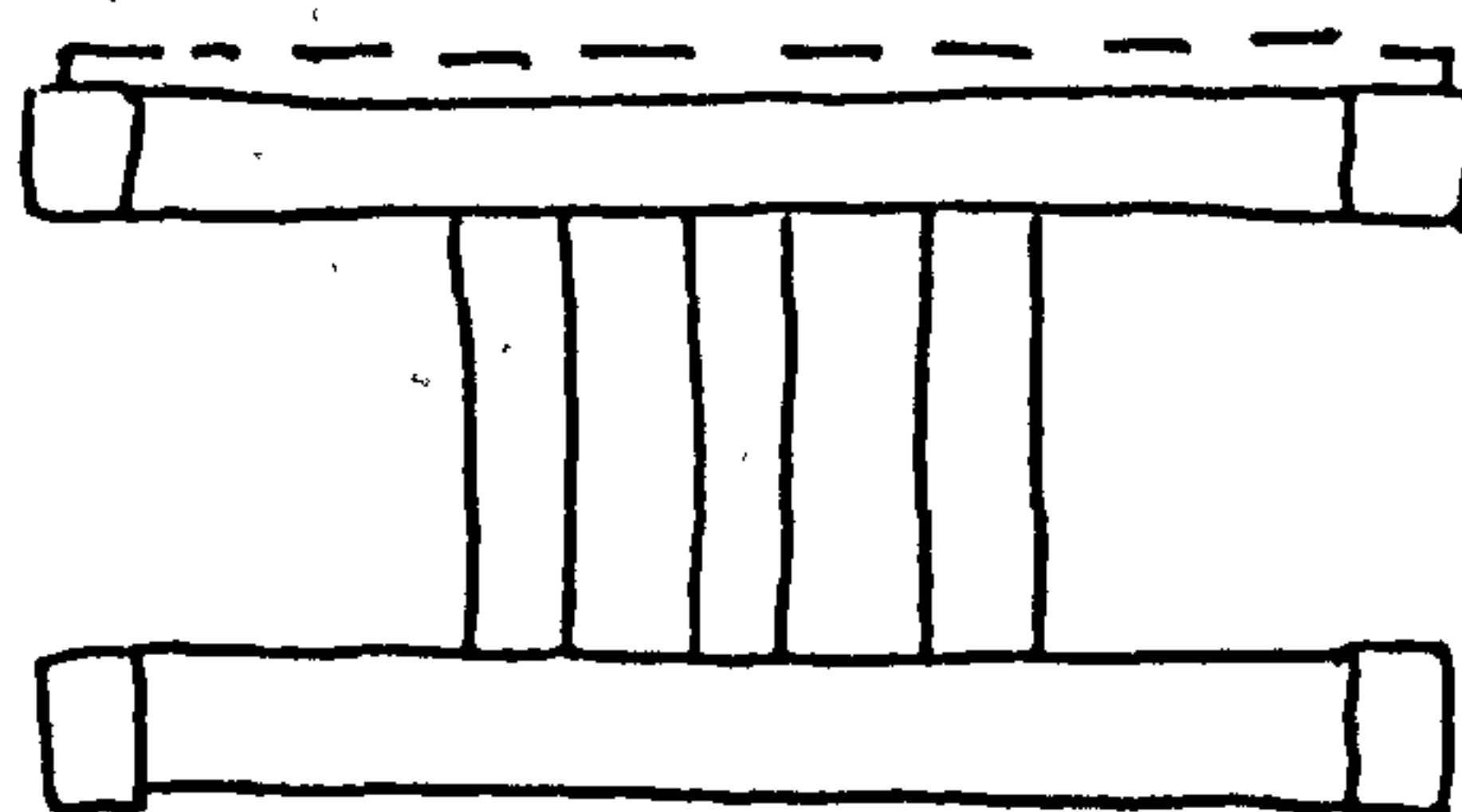
AII C45



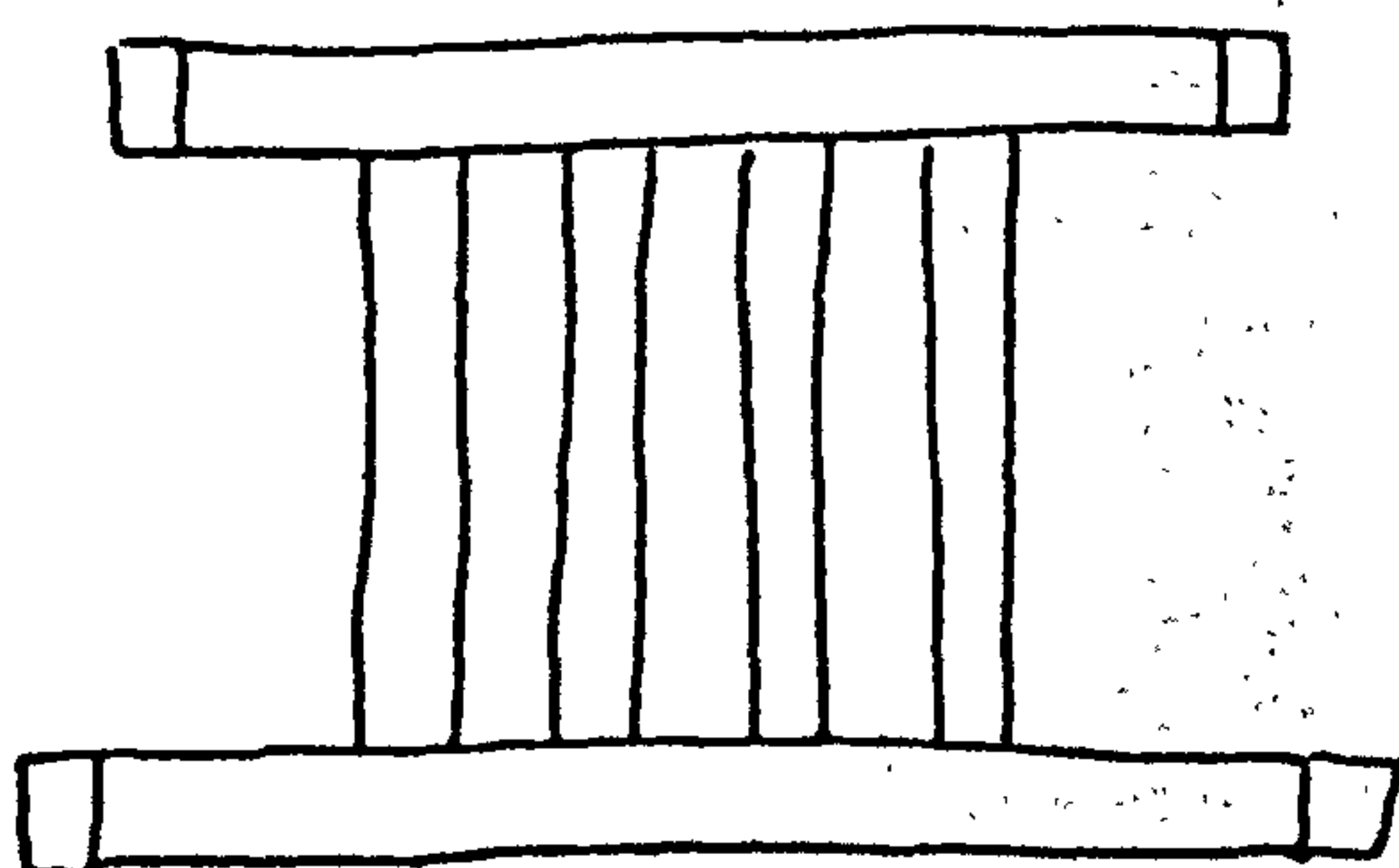
AII for two windows C62



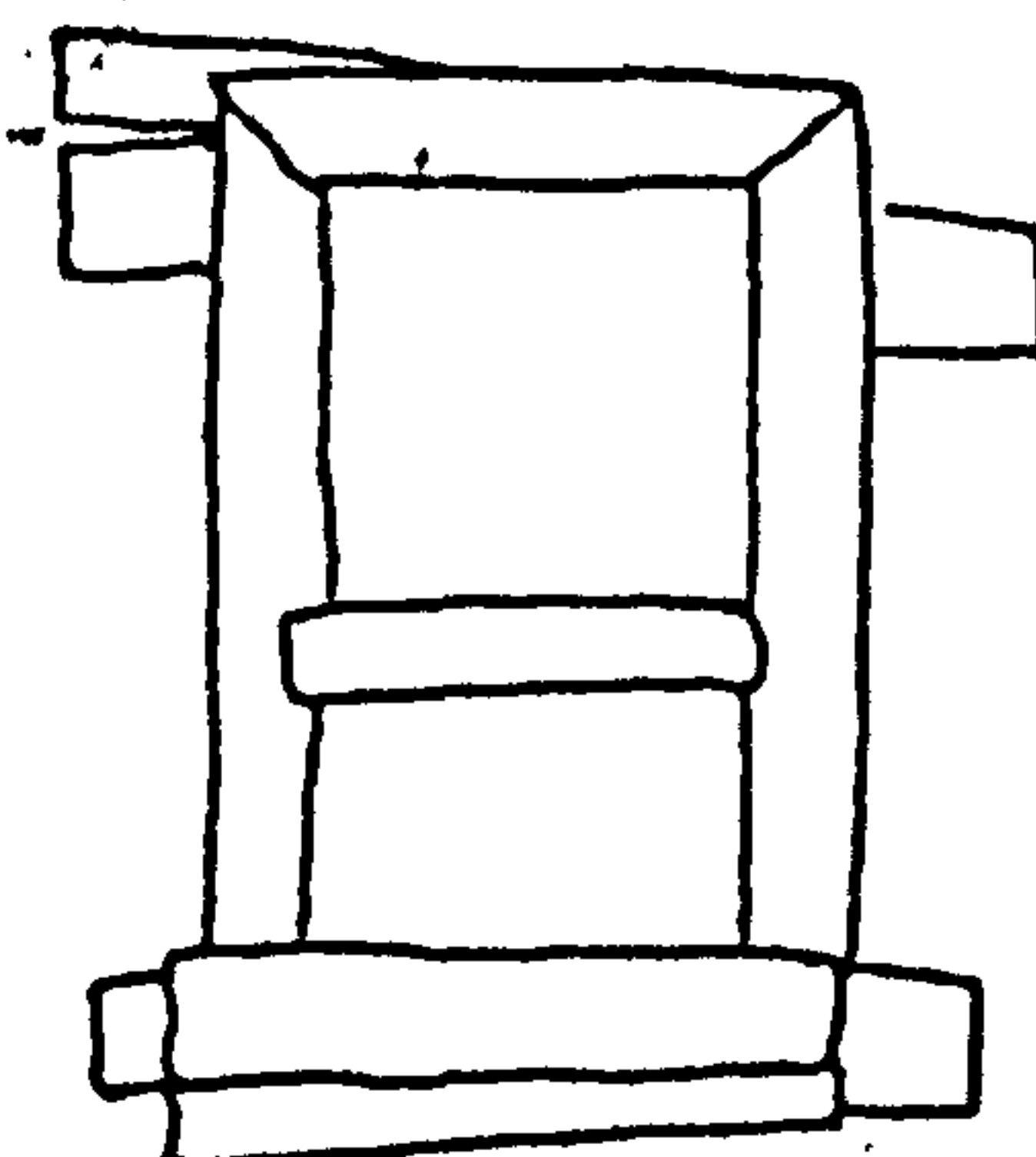
BI C51



BII C51



BIII C35B



C C56A

Figure 10. Yeivin's window typology.
(After Yeivin (1928) plates CVI & CVII)





Plate I. General views of the Tell at Edfu.





Plate II. Door in room 0 at 'la maison du nord'.



Plate III. Houses at Djeme.



Plate IV. A stone house on the Island of Philae.



Plate V. House 100 at Djeme.



Plate VI. Windows in houses at Djeme.



Plate VII. House S.E.VIII at Deir el-Medina showing arrangement of stairs.



Plate VIII. House 110 at Djeme.



Plate IX. A vault in 'la maison du nord' at Edfu.

